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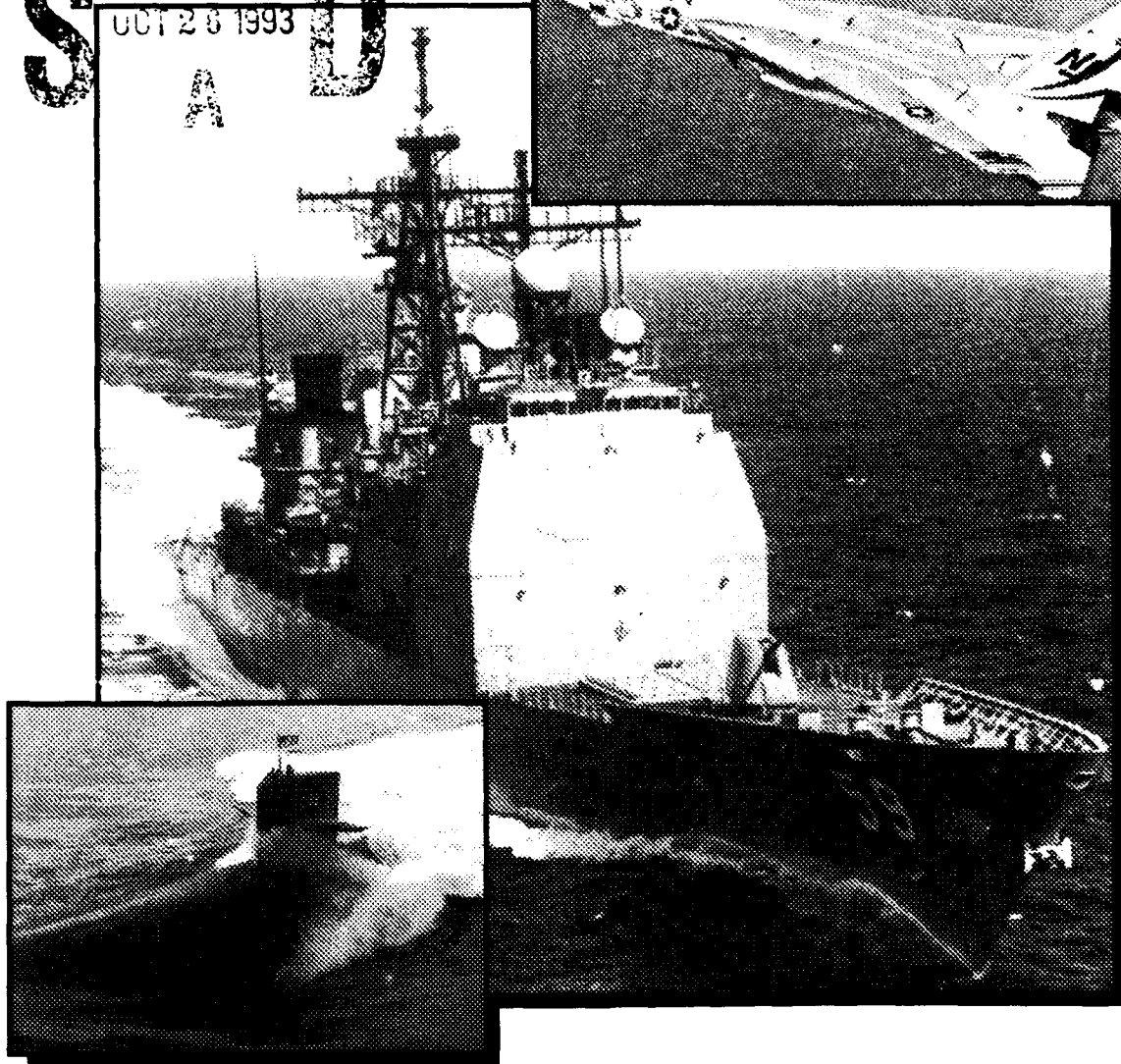
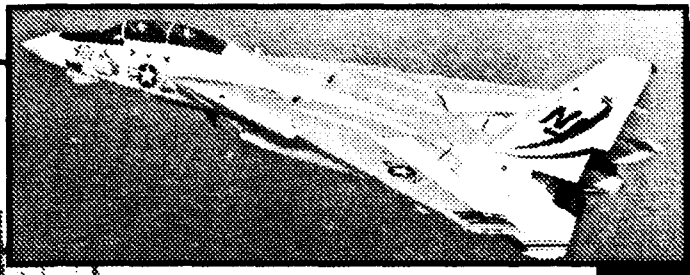


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NAVY LABORATORY/CENTER COORDINATING GROUP

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AUGUST 1993

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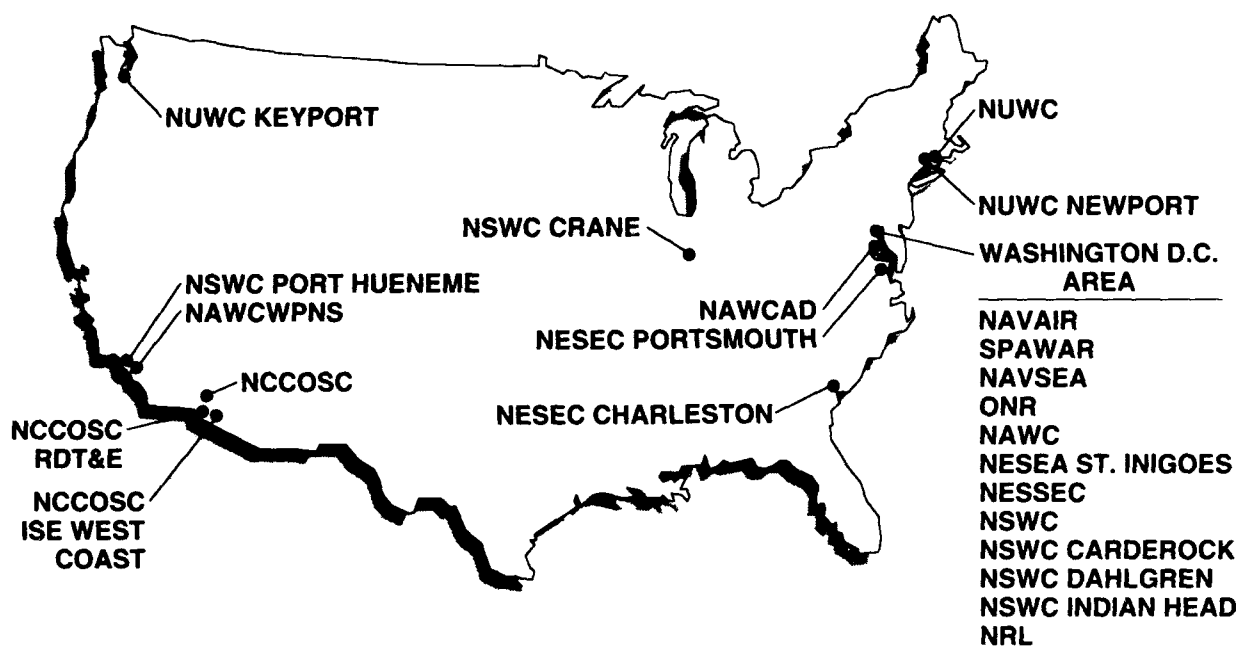


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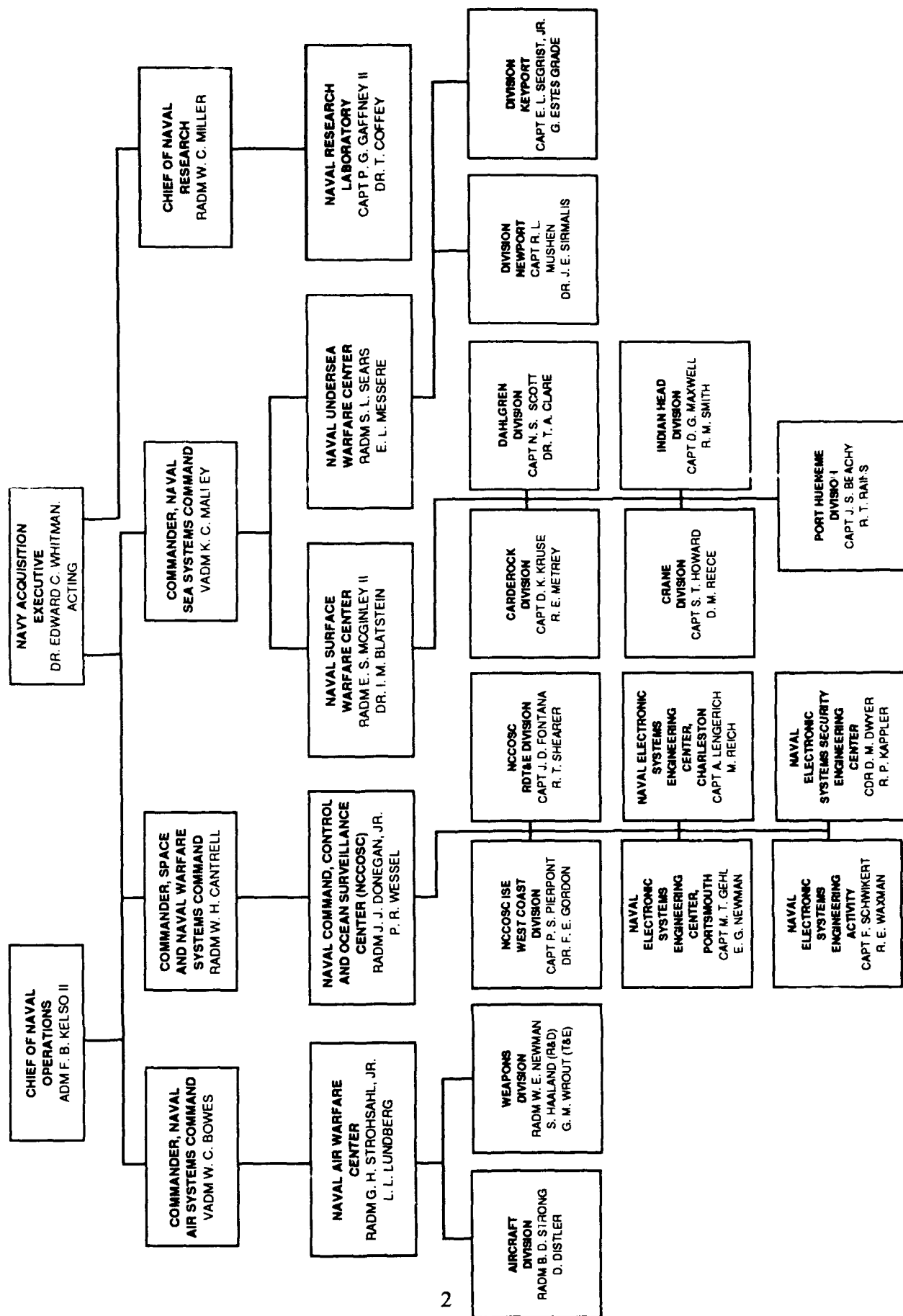


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WARFARE CENTERS, LABORATORIES, AND ENGINEERING CENTERS



**COMMANDER
NAVAL AIR SYSTEMS COMMAND**



VICE ADMIRAL WILLIAM C. BOWES, USN

Vice Admiral William C. Bowes was born in Brooklyn, NY. He received his B.S. degree in Chemical Engineering from the University of Idaho in 1963. He graduated from the Naval Test Pilot School in 1968 and received his M.S. degree in Systems Acquisition Management from the Naval Postgraduate School in 1974.

After receiving his wings in 1964, Vice Admiral Bowes joined the light-attack community at Naval Air Station, Lemoore, CA, where he served with Attack Squadron 113 (VA-113) flying A-4 aircraft. He later served with Attack Squadron 94 (VA-94), flying A-7s on combat missions from USS *Kitty Hawk* (CV 63), USS *Enterprise* (CVN 65), and USS *Coral Sea* (CV 43). He flew 350 combat missions in Southeast Asia between 1965 and 1972. He served with Attack Squadron 195 (VA-195) ("Dambusters") as Executive Officer and then as Commanding Officer from 1976 to 1979. During this time he operated with the Pacific and Atlantic Fleets from *Kitty Hawk* and USS *America* (CV 66).

An experienced test pilot, Vice Admiral Bowes spent three tours at the Naval Air Test Center, Patuxent River, MD, serving as an engineering test pilot, as an instructor, as Operations Officer at the Test Pilot School, and as Director of the Systems and Engineering Test Directorate.

In 1980 Vice Admiral Bowes became F/A-18 Assistant Program Manager for Systems and Engineering at Naval Air Systems Command. He was next assigned as F-14 Aircraft and Phoenix Missile System Program Manager.

After his promotion to Rear Admiral in 1987, Vice Admiral Bowes was assigned as Director, Cruise Missiles Project. He became the first Director of the Unmanned Aerial Vehicles Joint Project the following year. In 1990 he was designated the Program Executive Officer for both projects. Vice Admiral Bowes became Commander, Naval Air Systems Command, in March 1991.

His decorations include the Distinguished Service Medal, the Legion of Merit (three awards), the Distinguished Flying Cross (three awards), 36 Air Medals with two individual awards, the Navy Commendation Medal (eight awards), and the Vietnamese Gallantry Cross. He is an Associate Fellow of the Society of Experimental Test Pilots.

Vice Admiral Bowes and his wife, the former Delores Mello, have three daughters, Margaret, Jennifer, and Kristine.

**VICE COMMANDER
NAVAL AIR SYSTEMS COMMAND**



REAR ADMIRAL DONALD VAUX BOECKER, USN

Rear Admiral Donald Boecker was born in Aurora, IL. After attending the Naval Academy, he received his flight training at Pensacola, FL. In 1962 he joined Attack Squadron 76 (VA-76), Oceana. In 1963 he became Personnel Officer for Attack Squadron 75 (VA-75). During 1966 and 1967 he attended the Test Pilot School, Patuxent River, MD.

In 1967 Rear Admiral Boecker joined the Attack Branch of the Weapons Systems Test Division, Patuxent River, MD, as Project Officer, Board of Inspection and Survey Trials for the A-7E. In 1969 he became a Training Officer and A-6 instructor pilot with Attack Squadron 42 (VA-42). From 1970 to 1972 he served as Maintenance Officer with VA-75, after which he began a year-long tour as Plans and Programs Officer on the staff of Commander, Mediterranean Attack Wing One.

After serving 3 1/2 years as Executive Officer and then Commanding Officer of Attack Squadron 85 (VA-85), Rear Admiral Boecker joined the Naval Air Systems Command as A-6 Class Desk Officer. In 1978 he became Executive Officer aboard USS *Saratoga* (CVA 60). In 1979 he became Staff Specialist, Tactical Air Warfare Branch, in the Office of the Undersecretary of Defense (Research and Evaluation). After a brief tour as Senior Officer of the Ship Material Readiness Course in Idaho Falls, ID, he became Commanding Officer of USS *Concord* (AFS 5) in 1982.

In August 1983 he became Head, Aviation Plans and Programs, in the Office of the Chief of Naval Operations, and in 1984 he became Deputy Director, Aviation Plans and Requirements Division. During 1986 and 1987 he served as Executive Assistant to the Assistant Secretary of the Navy (Research, Development, and Acquisition). He became Director, Navy Space Systems Division, in the Office of the Chief of Naval Operations (OPNAV) in 1987, serving in that position for a year. In 1988 he was appointed as Commander, Naval Air Test Center, Patuxent River. In August 1991 he became Vice Commander, Naval Air Systems Command.

Rear Admiral Boecker's awards include the Legion of Merit (three awards), the Distinguished Meritorious Service Medal, six Air Medals, the Navy Commendation Medal with Combat "V" (two awards), the Combat Action Ribbon, a Navy Unit Commendation, two Meritorious Unit Commendations, the Armed Forces Expeditionary Medal, the Republic of Vietnam Armed Forces Meritorious Unit Citation (Gallantry Cross), the Vietnam Service Medal, and the Republic of Vietnam Campaign Medal with device.

Rear Admiral Boecker is married to the former Gay Scott. They have six children: Michelle, Stephanie, Danielle, Virginia, Dione, and Scott.

**DEPUTY COMMANDER
NAVAL AIR SYSTEMS COMMAND**



ROBERT VORHEES JOHNSON, JR.

Mr. Robert Voorhees Johnson, Jr., was born in Roanoke, VA. He received his B.S. degree in 1960 and his M.S. degree in 1962, both in Aeronautical Engineering from the University of Notre Dame. He received an M.S. degree in Systems Management from the University of Southern California in 1970, and he has done postgraduate work toward a Ph.D. in Engineering Management at George Washington University.

Mr. Johnson began his career as an aerospace engineer with the USA Advanced Material Concepts Agency in Alexandria, VA, in 1968. In 1972 he joined the Army Aviation Systems Command in St. Louis, MO, first as Chief Project Engineer and Technical Director of the Heavy Lift Helicopter Project, then as Deputy Chairman for the Utility Tactical Transport Aircraft System Source Selection Evaluation Board, and finally as Deputy Project Manager for Special Electronic Mission Aircraft.

In 1978 Mr. Johnson joined USADARCOM, Alexandria, VA, as Army Aviation Development Manager and Technical Administrator. In July 1980 he moved to the Naval Air Systems Command (NAVAIR) as Assistant Deputy Commander for Strike Warfare and Assault Projects. In 1983 he became Executive Director for Systems and Engineering at NAVAIR, and in July 1985 he assumed his current position as Deputy Commander, NAVAIR.

Mr. Johnson's awards include the Navy Distinguished Civilian Service Award, the Presidential Distinguished Executive Award, the Presidential Meritorious Executive Award, a Special Act or Service Award, and the Navy Meritorious Civilian Service Award. He has also received the Army's Exceptional Civilian Service Award and Meritorious Civilian Service Award, as well as outstanding performance awards and numerous Senior Executive Service bonus awards.

Mr. Johnson is married to the former Susan Penny. They have two children, Robert III and Michael.

NAVAL AIR WARFARE CENTER
WASHINGTON, DC 20361-6000
(703) 746-7730 DSN 286-7730

MISSION

To be the Navy's full-spectrum research, development, test and evaluation, engineering, and Fleet support center for air platforms, unmanned aerial vehicles, missiles and missile subsystems, weapons systems associated with air warfare, and for sensor systems used to conduct antisubmarine warfare from air platforms.

PERSONNEL

Commander: RADM George H. Strohsahl, Jr., USN Ext. 2201
 Technical Director: Mr. Lewis L. Lundberg Ext. 2202

	Civilian	Military
Total On Board (10/92)	20,672	3,845
FTP On Board (10/92)	20,255	
FTP Scientists & Engineers (10/92)	7,676	

LEADERSHIP AREAS

Air warfare analysis and modeling	Aircraft and missile survivability and vulnerability
Air vehicles, manned and unmanned, and air vehicle propulsion systems	Aircraft and missile active and passive signatures
Aircraft crew equipment and life support	Aerodynamic deceleration (parachute systems) and components
Airborne surveillance systems	Aircraft and weapons ranges
Tactical aircraft combat and combat control systems	MRTFB management
Air ASW systems and sensors	Aviation ground support equipment
Missiles and missile subsystems	Aircraft launch and recovery system
Freefall and unguided weapons	Air platform systems integration
Aircraft electronic warfare	Targets and simulators for air-launched systems

FUNDING

(\$3,515.6 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	0.2	SPAWAR	2.1
6.2	2.7	NAVAIR	71.2
6.3a	1.6	NAVSEA	3.0
6.3b	5.4	NAVFAC	0.5
6.4	8.4	NAVSUP	0.3
6.5	9.4	OCNR	3.2
6.6	4.2	SSPO	0.8
Other RDT&E	2.2	Other DOD	6.6
O&MN	15.1	Other Navy	11.5
APN	21.3	Other Gov't	0.5
OPN	6.6	Private Parties	0.3
WPN	7.1		
SCN	0.7		
Other Navy	1.9		
All Other	13.2		
Total	100	Total	100

PROPERTY

Land	Acquisition Costs	Buildings
Owned 1,156,460 acres	Real Property \$5,737 Million	RDT&E 7,913,284 ft ²
	Equipment \$789 Million	Administrative 1,677,672 ft ²
		Other 14,489,355 ft ²

NAVAL AIR WARFARE CENTER



COMMANDER

REAR ADMIRAL GEORGE H. STROHSAHL, JR., USN

Rear Admiral George H. Strohsahl, Jr., is a 1959 graduate of the Naval Academy and holds an M.S. degree in Aerospace Physics from the Naval Postgraduate School. A designated Material Professional with operational assignments in A-4 and A-6 squadrons from both Atlantic and Pacific fleets, he has amassed over 5,000 flight hours.

Rear Admiral Strohsahl commanded VA-65, an NAS Oceana-based A-6E squadron, and was Air Officer aboard USS *Nimitz* (CVN 68). His staff assignments have included Chief Staff Officer of Commander, Medium Attack Wing One; Director, Tactical Air Analysis, Office of the Secretary of Defense; and Executive Director, Logistics/Fleet Support Group, Naval Air Systems Command. While assigned to VX-5 at China Lake, CA, he conducted operational testing of the A-7E and other attack aircraft and weapon systems. As a Material Professional Captain and Flag Officer, he has remained active as a test pilot, flying both the A-6 and the F/A-18 in a variety of test projects.

As the NAVAIR Program Manager of the F/A-18 Hornet Naval Strike Fighter, Rear Admiral Strohsahl was responsible for managing the acquisition and initial support for the largest nonstrategic procurement program in the Navy. His responsibility extended to the procurement of F/A-18 Hornets for the Air Forces of Australia and Spain as well as support of the Canadian program. During his tenure as Program Manager, the Hornet was introduced to the Fleet and made its highly successful initial deployment. In addition, Rear Admiral Strohsahl developed the first block upgrade, F/A-18C, and initiated development of the Night Attack version of the Hornet.

In his first flag assignment as Program Director, Tactical Aircraft Programs, Naval Air Systems Command, Rear Admiral Strohsahl coordinated the management of all Navy tactical aircraft programs. He served as Commander, Pacific Missile Test Center, Point Mugu, CA, before returning to Naval Air Systems Command, where he served as Vice Commander. He assumed command of the Naval Air Warfare Center in January 1992.

Rear Admiral Strohsahl's personal awards include the Legion of Merit with two gold stars, the Meritorious Service Medal, the Strike-Flight Air Medal with numeral seven, the Navy Commendation Medal with Combat V and gold star, and the Navy Achievement Medal.

Rear Admiral Strohsahl is married to the former Marvalyn Fiske. They have three children, Bethany, David, and Laurie.

NAVAL AIR WARFARE CENTER



TECHNICAL DIRECTOR

LEWIS L. LUNDBERG

Mr. Lewis L. Lundberg was born in Flint, MI. He received his B.S. degree in Electrical Engineering from Michigan State University in 1959 and was then employed as an electrical engineer at the Naval Avionics Center (NAC), Indianapolis. He earned his M.S. degree in Industrial Operations from Purdue University in 1970. Subsequent education has included numerous classes and seminars such as Dr. W. Edwards Deming's Quality, Productivity and Competition Operations, the U.S. Navy Executive Symposium on Information Technology, and the University of Wisconsin Executive Program.

During his assignment at NAC, Mr. Lundberg held various engineering positions that involved increasing supervisory responsibility. In 1972 he was named Director of Manufacturing Engineering and in 1975 became the Deputy Director of Engineering. In 1976 he was appointed Director of Manufacturing Technology.

From 1983 to 1984 he held various interim positions, including Staff Assistant to the Executive Director, Acting Director of Plans and Programs, and Acting Director of Applied Research. From 1984 to 1989, he was NAC's Director of Engineering. In 1989 Mr. Lundberg was named Executive Director, Naval Air Engineering Center.

In 1991 Mr. Lundberg was selected as the prospective Technical Director of the Naval Air Warfare Center (NAWC) and was assigned to the transition team to establish NAWC. In 1992 he became NAWC Technical Director.

Mr. Lundberg is a member of the Senior Executive Association, the International Test and Evaluation Association, the Navy League, and the American Society of Naval Engineers. He also serves on the Board of Directors of the Defense Test and Evaluation Professional Institute. Mr. Lundberg is a member of the Senior Executive Service.

In 1989 he was awarded the U.S. Navy Meritorious Civilian Service Award, and in 1990 he received a Presidential Meritorious Rank Award.

Mr. Lundberg is married to the former Lois Arlene Schafer. They have three children, Paul, John, and Beth.

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION
PATUXENT RIVER, MD 20670-5304
(301) 863-1000 DSN 326-1000

MISSION

To be the Navy's principal research, development, test, evaluation, engineering, and Fleet support activity for Naval aircraft, engines, avionics, aircraft support systems, and ship/shore/air operation. This mission includes: research and development of manned and unmanned air vehicles, air vehicle propulsion systems, core and mission-unique avionics including air ASW systems, airborne surveillance systems, aircraft launch and recovery systems, aviation support equipment, and related functions such as aircraft modeling and analysis and aircraft active and passive signatures; systems integration of all air platform subsystems; conduct of test and evaluation for these same aircraft, propulsion, avionics and support systems, as well as aircraft electronics warfare throughout the spectrum of the life cycle to ensure successful operational performance; maintain aircraft test and evaluation ranges; assure an effective transition to production, including manufacturing production support and pilot/emergency production, to maintain a responsive industrial base; and perform in-service engineering of aircraft, avionics, and launch/recovery systems; direct the operations of the Naval Air Warfare Center Aircraft Division and its subordinate activities.

PERSONNEL

Commander: RADM Barton D. Strong, USN Ext. 1100
 Deputy Commander: Mr. Dennis Distler Ext. 1108

	Civilian	Military
Total On Board (10/92)	11,333	2,091
FTP On Board (10/92)	11,072	
FTP Scientists & Engineers (10/92)	4,462	

LEADERSHIP AREAS

Aircraft testing	Air ASW systems and sensors
Aircraft launch and recovery system	Aircraft electronic warfare T&E
Aircraft T&E ranges	Air platform systems integration
Aviation support equipment	Aircraft active and passive signatures
Aircraft modeling and analysis	Air vehicle propulsion
Propulsion systems test	Electronics manufacturing production support
Air vehicles, manned and unmanned	Electronic systems transition to production
Aircrew equipment and life support	Pilot/emergency production
Airborne surveillance systems	

FUNDING

(\$1,880.6 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	0.1	SPAWAR	3.0
6.2	3.5	NAVAIR	71.9
6.3a	1.0	NAVSEA	1.8
6.3b	5.3	NAVFAC	0.1
6.4	9.8	NAVSUP	0.2
6.5	7.1	OCNR	3.5
6.6	3.5	SSPO	0.8
Other RDT&E	0.0	DOD	7.2
O&MN	13.3	Other Navy	10.3
APN	26.4	Other Gov't	0.8
OPN	10.8	Private Parties	0.4
WPN	2.4		
SCN	0.8		
Other Navy	2.8		
All Other	13.2		
Total	100	Total	100

PROPERTY

Land		Acquisition Costs		Buildings	
Owned	15,472 acres	Real Property	\$3,016 Million	RDT&E	4,004,147 ft ²
		Equipment	\$ 529 Million	Administrative	887,981 ft ²
				Other	7,906,032 ft ²

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION



COMMANDER

REAR ADMIRAL BARTON D. STRONG, USN

Rear Admiral Barton D. Strong was born in Ogden, UT, and grew up in Twin Falls, ID. He graduated from the Naval Academy in 1964 and was designated a Naval Aviator and helicopter pilot in 1966.

Following SH-3A training in Helicopter Anti-Submarine Squadron Ten, he reported to Helicopter Anti-Submarine Squadron Two, where he flew combat search-and-rescue missions aboard several aircraft carriers in the Vietnam conflict from 1966 to 1969. After graduating from the Naval Test Pilot School in 1970, he served as a project test pilot and a test pilot instructor at the Naval Air Test Center, Patuxent River, MD. During this tour, he earned his M.S. degree in Management Engineering from George Washington University.

Rear Admiral Strong was selected into the Aeronautical Engineering Duty Officer community in 1972 and was subsequently ordered to the Naval Air Rework Facility, Pensacola, FL; he was assigned as Comptroller and Administrative Officer and also flew as a maintenance test pilot. In 1973 he reported to the staff of the Commander Naval Forces Atlantic, where he served as Navy Helicopter Class Desk Officer.

Beginning in 1978, Rear Admiral Strong served 3 years in the Joint Cruise Missiles Program Office in Washington, DC, where he was assigned to Common Weapons Control System development. In 1981 he reported to the Naval Air Systems Command as Deputy Program Manager of the Navy's H-53 programs. In this position, he managed the in-service RH-53D, introduced the CH-53E Vertical On Board Delivery (VOD) helicopters into the Fleet, and developed the MH-53E.

In 1984 he was assigned as Director, Systems Engineering Test Directorate, at the Naval Air Test Center. His responsibilities included testing and evaluating a broad spectrum of fixed- and rotary-wing aircraft. From 1986 to 1988 Rear Admiral Strong served as Commanding Officer, Naval Plant Representative Office, Stratford, CT.

Following this command tour, he was assigned to the Naval Air Systems Command as Program Manager for Navy H-60 helicopters and was responsible for the Navy's SH-60B, SH-60F, and HH-60H programs, in addition to the Coast Guard's HH-60J program. Rear Admiral Strong assumed command of the Naval Air Warfare Center Aircraft Division, Patuxent River, in March 1992.

Rear Admiral Strong is married to the former Leslie Steffes. They have three daughters, Laura, Kim, and Wendy.

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION



DEPUTY COMMANDER

DENNIS DISTLER

Mr. Dennis Distler was born in Brooklyn, NY. He earned his B.S. degree in Electrical Engineering in 1968 from Lowell Technological Institute, Lowell, MA, and his M.S. degree in Systems Management in 1972 from the University of Southern California.

Mr. Distler began his career at the Naval Air Systems Command (NAVAIR), Washington, DC, in 1968. He served for more than 10 years in engineering positions of increasing responsibility, involving the acquisition and management of radar, missile, avionics, and electronic warfare systems.

From 1978 to 1980 Mr. Distler was an Advanced Development Project Officer responsible for management of several airborne-technology demonstration projects. From 1980 to 1985 he was Deputy Program Manager for the A-6/EA-6/KA-6 aircraft programs, with broad responsibilities for the technical, financial, and programmatic aspects of those major programs.

Selected for promotion to the Senior Executive Service in 1985, Mr. Distler was appointed Director, Avionics Research and Development Division, and subsequently became Technical Director, Avionics and Computer Resources Division, at NAVAIR. He was also the Navy's representative to the North Atlantic Treaty Organization Air Force Armaments Group on avionics and landing systems.

In 1988 Mr. Distler joined Naval Air Systems Command Headquarters as Program Director, Air for Electronic Warfare and Support Programs. In this position he was responsible for all facets of electronic warfare programs, Fleet electronic warfare support, common avionics programs, air traffic control and landing systems, training and trainers, and automatic test equipment. He was designated by the Deputy Chief of Naval Operations (logistics) as the Navy Principal on the Joint Logistic Commanders Coordinating Group for electronic warfare.

In 1990 Mr. Distler was appointed Director, Systems Engineering Test Directorate, Naval Air Test Center, Patuxent River, MD. During this assignment he also served as the Naval Air Warfare Center Aircraft Division Transition Team Leader. In January 1992 he assumed his current position as Deputy Commander, Naval Air Warfare Center Aircraft Division.

Mr. Distler was awarded the Presidential Rank of Meritorious Executive in 1991. Other awards include three Senior Executive Service Awards and the Navy Civilian Meritorious Service Medal.

Mr. Distler is married to the former Ann Helen Urbowicz. He has a daughter, Amy, and a son, John.

NAVAL AIR WARFARE CENTER WEAPONS DIVISION
POINT MUGU, CA 94032-5001
(805) 989-1110 DSN 351-1110

MISSION

To be the Navy's full-spectrum research, development, test, evaluation, and in-service engineering center for weapon systems associated with air warfare (except antisubmarine warfare systems), missiles and missile subsystems, aircraft weapons integration, and assigned airborne electronic warfare systems, and to maintain and operate the air, land, and sea Naval Western Test Range Complex.

PERSONNEL

Commander:	RADM William E. Newman, USN	Ext. 7113
Deputy Commander:	Mr. Sterling Haaland	(619) 939-3409
Deputy Commander:	Mr. Gerald M. Wrout	Ext. 7275

	Civilian	Military
Total On Board (10/92)	9,339	1,754
FTP On Board (10/92)	9,183	
FTP Scientists & Engineers (10/92)	3,214	

LEADERSHIP AREAS

Airborne weapons T&E	Weapon systems integration
Air/sea ranges	Aircraft/missile survivability/vulnerability testing
Aircraft armament systems/equipment	Parachute systems/components
Targets and simulators for air-launched systems	Air/land, radar cross section (RCS), and electronic warfare (EW) ranges
Aerial target/threat simulator development	Aircraft electronic warfare R&D and in-service engineering
Missile/missile subsystems R&D and in-service engineering	Missile signatures, active and passive
Freefall/unguided weapons R&D and in-service engineering	Combat and combat control systems R&D
Weapons modeling and analysis	

FUNDING

(\$1,635.0 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.1	0.3	SPAWAR	1.1
6.2	1.9	NAVAIR	70.9
6.3a	2.3	NAVSEA	4.3
6.3b	5.5	NAVFAC	1.0
6.4	6.8	NAVSUP	0.3
6.5	12.0	OCNR	2.8
6.6	5.1	SSPO	0.8
Other RDT&E	5.2	DOD	5.8
O&MN	17.1	Other Navy	12.3
APN	15.5	All Others	<u>0.7</u>
OPN	1.5	Total	100
WPN	12.4		
SCN	0.7		
Other Navy	4.2		
All Others	<u>9.5</u>		
Total	100		

PROPERTY

Land	Acquisition Costs		Buildings	
Owned	1,140,988 acres	Real Property \$2,721 Million	RDT&E	3,909,137 ft ²
		Equipment \$ 260 Million	Administrative	789,691 ft ²
			Other	6,583,323 ft ²

NAVAL AIR WARFARE CENTER WEAPONS DIVISION



COMMANDER

REAR ADMIRAL WILLIAM E. NEWMAN, USN

Rear Admiral William E. Newman assumed command of the Naval Air Warfare Center Weapons Division (NAWCWPNS) at its inception in January 1992. From November 1990 until January 1992, he was in command of the Pacific Missile Test Center, Point Mugu, CA.

Rear Admiral Newman, a native of Chicago, IL, graduated from the Naval Academy in 1961 and was designated a Naval Aviator in 1962. His first operational assignment was with the "Fighting Redcocks" of Attack Squadron 22 (VA-22), flying the A-4 Skyhawk. Two deployments aboard USS *Midway* (CVA 41) during this tour included combat operations in Vietnam.

During subsequent operational tours he served as Maintenance Officer of Attack Squadron 83 (VA-83), flying the A-4 and A-7E aircraft; as Flag Secretary and Aide to Commander, Carrier Division 4; as Operations Officer of CA-122, the Pacific Fleet's A-7E readiness training squadron; as Commanding Officer of the VA-195 "Dambusters," flying the A-7E; as Commander of Carrier Air Wing 9; and as Commanding Officer of the combat stores ship, USS *White Plains* (AFS 4). Rear Admiral Newman made numerous deployments to the Indian Ocean, Pacific, Atlantic, and Mediterranean theaters during these tours. He has logged in 5,200 flight hours in more than 40 types of operational and flight test aircraft.

Following his command of VA-195, Rear Admiral Newman served as Commanding Officer and Flight Leader of the Navy Flight Demonstration Squadron, the Blue Angels. During 1978 and 1979 he led the team in more than 200 flight demonstrations throughout the U.S. and Canada.

Other shore duty tours have primarily involved the weapon systems acquisition process. Following a year of test pilot training at the Empire Test Pilot's School in England, Rear Admiral Newman tested numerous ordnance systems at the Naval Air Test Center, Patuxent River, MD. He served as Head, Air Launched Weapons Requirements Branch (OP-507), in the Office of the Chief of Naval Operations. As the Naval Air Systems Command's Program Manager for Defense Suppression Systems (PMA-242), he managed the development and procurement of several air-to-surface guided missile programs. Rear Admiral Newman then served as Program Director, Air Warfare Programs, at Naval Air Systems Command headquarters.

He and his wife, the former Judith Morgan, have four children.

NAVAL AIR WARFARE CENTER WEAPONS DIVISION



DEPUTY COMMANDER FOR RESEARCH AND DEVELOPMENT

STERLING HAALAND

Mr. Sterling Haaland is the Deputy Commander for Research and Development at the Naval Air Warfare Center Weapons Division (NAWCWPNS). Previously he was Director, Weapons Directorate, of the newly established NAWCWPNS, which stood up in January 1992.

Before becoming Weapons Director, Mr. Haaland was Laboratory Director of the (then) Naval Weapons Center (NWC), China Lake, CA, a position he held since 1989.

Mr. Haaland, a native of Havre, MT, received his B.S. degree in Physics from Oregon State University in 1961, after which he was employed by Motorola, Inc., as a physicist designing and developing RF crystal filters for commercial radio receivers. After earning his M.S. degree in Electronic Engineering from Montana State University in 1968, Mr. Haaland entered civil service at NWC.

In 1973 Mr. Haaland became Head of NWC's Seeker Systems Branch and served as the Sidewinder infrared counter-countermeasures project engineer. In 1975 he accepted a 1-year development assignment as Technology Block Guidance and Control Administrator in the Naval Air Systems Command. Upon returning to NWC, he was selected as Deputy Air Weaponry Technology Project Manager. In 1978 he became the Guidance and Weapon Control Technology Manager. In 1980 he was selected Head of the Radio Frequency Division, responsible for the management of technology-base projects related to missile guidance. In 1983 he was selected as Associate Department Head, Weapons Department. In 1987 Mr. Haaland was appointed to the Senior Executive Service as Assistant Technical Director for Engineering and Head, Engineering Department.

Mr. Haaland has served on the NATO Panel X RSG-9; as Chairmen of the Joint Service Guidance Control Committee; and as U.S. National Chairman of the Tripartite Technical Coordinating Panel Guidance and Control Working Group. He also served as a member of the NATO Advisory Group for Aerospace Research and Development (AGARD) Guidance and Control Panel. He is a member of the American Defense Preparedness Association and the American Society of Quality Control.

Mr. Haaland's awards include the NWC Technical Director's Award; the NWC Michelson Laboratory Award; and the Center's highest award, the L.T.E. Thompson Award.

He and his wife, LaVonne, are the parents of four children: Andy, Charmaine, Kjrsten, and Tony.

NAVAL AIR WARFARE CENTER WEAPONS DIVISION



DEPUTY COMMANDER FOR TEST AND EVALUATION

GERALD M. WROUTH

Mr. Gerald M. Wrouth was born in Chicago, IL. He earned his B.S. degree in Aeronautical Engineering in 1959 from St. Louis University, St. Louis, MO, and his M.S. degree in Engineering in 1968 from the University of California, Los Angeles. In 1974 he was awarded a Sloan Fellowship at the Massachusetts Institute of Technology, where he earned an M.S. degree in Management in 1975.

Mr. Wrouth began his federal career in 1960 as an aerodynamics and digital systems engineer at the Pacific Missile Test Center (PMTC), Point Mugu, CA, where he subsequently served in positions of increasing responsibility. From 1976 to 1985 he was Head, Tactical Embedded Computer Resource Division, responsible for the F-14 and EA-6B aircraft software support activities (SSAs) and electronic warfare SSAs. He then served as Head of Weapon Programs and later as Associate Director, Electronic Warfare Directorate.

In 1987 Mr. Wrouth was promoted to the Senior Executive Service. He was appointed Associate Director, Range Directorate, and in 1989 became Director, Range Directorate. When PMTC became part of the Naval Air Warfare Center Weapons Division in 1992, Mr. Wrouth assumed his current position as Deputy Commander for Test and Evaluation.

Mr. Wrouth was awarded the Presidential Rank of Meritorious Executive in 1992. Other awards include Senior Executive Service Awards, the Navy Civilian Meritorious Service Award, and the Point Mugu Outstanding Professional of the Year Award. Mr. Wrouth has authored and published numerous articles and professional papers.

Mr. Wrouth is married to the former Joanne Lovitz. They have a son, Jeffrey, and two daughters, Jeannine and Josie.

**COMMANDER
SPACE AND NAVAL WARFARE SYSTEMS COMMAND**



REAR ADMIRAL WALTER H. CANTRELL, USN

Rear Admiral Walter Hollingsworth Cantrell was born in Tyron, NC. He received his commission from the Naval Academy in 1958. After service aboard USS *Galveston* (CLG 3), he attended submarine school in 1959 and then reported to USS *Corporal* (SS 346).

From 1962 to 1965 he attended the Massachusetts Institute of Technology, where he received an M.S. degree in Naval Architecture and Marine Engineering as well as the Naval Engineer degree. Designated an Engineering Duty Officer, he was assigned to the Pearl Harbor Naval Shipyard. In 1968 he reported to the Naval Ship Systems Command to participate in the establishment of the SSN 668 and Later Design Submarine Acquisition Project (PMS 393). In 1971 he was assigned to the Republic of Vietnam as Senior Advisor to the Vietnamese Navy Technical Bureau. He next reported to the Chief of Naval Operations as the SSN Program Coordinator in OP-02 and as SSN Ships Characteristics Board member in OP-097. In 1974 he was assigned as Repair Officer aboard USS *Canopus* (AS 34), Submarine Squadron 14, Holy Loch, Scotland. In 1976 he was the on-site Project Manager Representative for the SSN 688-class (*Los Angeles*-class) submarine with additional duties as SUPSHIP Newport News, SSN Project Officer. In 1977 he became the Deputy SUPSHIP Newport News, and in 1979 he reported to the Engineering Duty Officer School, first as the Officer-in-Charge and later as the School's first Commanding Officer.

Rear Admiral Cantrell became Program Manager of the Trident Submarine Acquisition Project in 1980 and directed the delivery of the first four Trident submarines to the Fleet. In 1984 he became Deputy Commander for Submarines (SEA 92), Naval Sea Systems Command (NAVSEA). In June 1990 he was assigned as Vice Commander, NAVSEA. During this assignment he was appointed acting Commander, NAVSEA, from April to June 1991. Rear Admiral Cantrell assumed his current position as Commander, Space and Naval Warfare Systems Command, in September 1992.

Rear Admiral Cantrell's personal awards include the Legion of Merit (3), the Meritorious Service Medal (3), the Navy Commendation Medal (2), the Navy Unit Commendation (2), the Meritorious Unit Commendation (2), the National Defense Medal (2), and various campaign awards. He is a member of the Society of Naval Architects and Marine Engineers and the American Society of Naval Engineers.

Rear Admiral Cantrell is married to the former Elizabeth Wilson. They have two children.

**VICE COMMANDER
SPACE AND NAVAL WARFARE SYSTEMS COMMAND**



REAR ADMIRAL RAY C. WITTER, USN

Rear Admiral Ray C. Witter is a 1964 graduate of the Naval Academy. Following commissioning, he served aboard USS *Bridget* (DE 1024) and USS *Koiner* (DER 331). He attended the Naval Postgraduate School from 1968 to 1970 and received an M.S. degree in Engineering Acoustics. Following graduation as Honor Man from the Naval Destroyer School in 1971, he was assigned as Weapons Officer aboard USS *Biddle* (CG 34). From 1975 through 1977, he served in the Special Projects Office of the Naval Electronic Systems Command.

After a tour as Executive Officer of USS *Talbot* (FFG 4) from 1977 through 1979, Rear Admiral Witter was assigned to the Undersea Warfare Directorate in the Naval Sea Systems Command as Director, Surface Ship Sonar Division. In 1981 he was designated as an Engineering Duty Officer and in 1982 was assigned to the Naval Electronic Systems Command as Director of the Surveillance Towed Array Sensor System (SURTASS) Program. In 1986 he was designated the major systems Program Manager for the Navy's Integrated Undersea Surveillance System. After being selected for Rear Admiral in December 1988, he was assigned as Program Director of the Undersea Warfare Directorate in the Space and Naval Warfare Systems Command.

During his career Rear Admiral Witter has completed 10 extended deployments in Western Pacific, Atlantic, Mediterranean, and Indian Ocean waters. His decorations include the Legion of Merit (bronze star) and the Meritorious Service Medal. He is a designated Surface Warfare Specialist and is the only flag officer in the Navy with the Integrated Undersea Surveillance System (IUSS) specialist designation.

**DEPUTY COMMANDER
SPACE AND NAVAL WARFARE SYSTEMS COMMAND**



GENIE McBURNETT

Mrs. Genie McBurnett became Deputy Commander, Space and Naval Warfare Center Systems Command, in January 1993. From 1990 to 1993 she served as the Principal Deputy Assistant Secretary of the Navy (Research, Development and Acquisition). She was responsible for supporting the Assistant Secretary in the establishment of acquisition policy and procedures and the management of all Department of the Navy research, development, production, shipbuilding, and logistics support programs.

From September 1988 to March 1990 Mrs. McBurnett served as the Technical Director, Naval Warfare Analysis and Force Level Plans, in the Office of the Deputy Chief of Naval Operations (Naval Warfare) and was involved in the appraisal of all warfare areas, the development of comprehensive warfare requirements, and the summarization of warfare requirement guidance.

From 1986 through 1988 at the Space and Naval Warfare Systems Command, Mrs. McBurnett was responsible for structuring the organization, plans, and concepts for Battle Force Warfare Systems Architecture and Engineering. From 1970 through 1986 she served as a program manager in the Naval Sea Systems Command and was responsible for the concept formulation, engineering development, production, and Fleet support of combat systems on Poseidon and Trident submarines. During that time she was responsible for program management of individual sonar systems, the total sonar suite, and the complete tactical combat system aboard these ships, including the combat direction system, torpedo fire control, periscope systems, and countermeasures suites.

Mrs. McBurnett graduated summa cum laude and Phi Beta Kappa from Florida State University with a B.S. degree in Mathematics and Statistics. She graduated summa cum laude from George Washington University with an M.S. degree in Operations Research.

NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
SAN DIEGO, CA 92147-5042
(619) 553-0170 DSN 553-0170

MISSION

To be the Navy's full-spectrum research, development, test and evaluation, engineering and Fleet support center for command, control, and communications systems and ocean surveillance and the integration of those systems which overarch multiplatforms.

PERSONNEL

Commander: RADM John J. Donegan, Jr., USN Ext. 0170
 Technical Director: Mr. Paul R. Wessel Ext. 0170

	Civilian	Military
Total On Board (10/92)	5,706	525
FTP On Board (10/92)	5,667	
FTP Scientists & Engineers (10/92)	2,705	

LEADERSHIP AREAS

Command, control, and communication systems (C ³)	Ocean engineering
Command, control, and communication systems countermeasures	Navigation support
Ocean surveillance systems	Marine mammals
Command, control, and communication modeling and analysis	Integration of space communication and surveillance systems

FUNDING

(\$1,659.3 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.1	0.6	SPAWAR	41.9
6.2	3.5	NAVAIR	8.8
6.3a	1.0	NAVSEA	16.8
6.3b	3.3	NAVFAC	4.0
6.4	4.6	NAVSUP	2.5
6.5	0.8	OCNR	4.3
6.6	4.1	SSPO	0.3
Other RDT&E	6.2	DOD	14.2
O&MN	25.3	Other Navy	3.6
APN	0.6	Other	3.6
OPN	25.2	Total	100
WPN	1.7		
SCN	7.8		
Other Navy	1.4		
All Other	4.9		
DBOF	2.1		
AFMSE	3.6		
Other DOD	3.3		
Total	100		

PROPERTY

Land		Acquisition Costs		Buildings	
Owned	3,301 acres	Real Property	\$172 Million	RDT&E	2,155,701 ft ²
		Equipment	\$286 Million	Administrative	841,543 ft ²
				Other	1,856,546 ft ²

NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER



COMMANDER

REAR ADMIRAL JOHN J. DONEGAN, JR., USN

Rear Admiral John J. Donegan, Jr., a native of Milford, CT, enlisted in the Navy in 1958. He completed instruction at the Naval Preparatory School and was appointed to the Naval Academy, where he received his B.S. degree in Engineering in 1963. He served aboard the destroyer USS *Purdy* (DD 734) before entering Destroyer School in 1965. He served as Engineering Officer aboard USS *Voge* (DE 1047) from 1966 to 1969.

Rear Admiral Donegan received his Ph.D. in Physics from the Naval Postgraduate School in 1972. He was then assigned to the Naval Sea Systems Command, where from 1972 to 1979 he served two tours, one as Combat System Engineer for the construction of USS *Virginia* (CGN 38) and one as Deputy Technical Director of the Navy High-Energy Laser Project.

In 1979 he joined the Aegis program as Aegis Area Commander at the (then) Naval Surface Weapons Center, Dahlgren, VA. During this tour the Aegis Computer Center was brought on line. Rear Admiral Donegan was transferred to the Aegis Shipbuilding Project at Naval Sea Systems Command in 1982 and was responsible for the design of the Combat System for *Arleigh Burke*-class destroyers.

In 1986 Rear Admiral Donegan was assigned to the Strategic Defense Initiative Organization in the Office of the Secretary of Defense. He served almost 2 years as Program Manager for Phase One of the Strategic Defense System. During this time, strategic defense moved from research into a demonstration and validation program, and the engineering preparation for development began.

Rear Admiral Donegan assumed command of the Naval Research Laboratory, Washington, DC, in 1989. After returning briefly to the Naval Sea Systems Command (SEA-06) in 1991, he became Commander, Naval Command, Control and Ocean Surveillance Center in September 1991.

Rear Admiral Donegan has been a member of the Flagship Section Council and National Council of the American Society of Naval Engineers. He is a member of the American Physical Society, the American Association for the Advancement of Science, the Naval Institute, and Sigma Xi. His awards include the Defense Superior Service Medal, the Joint Meritorious Unit Award, the Legion of Merit, the Meritorious Service Medal, and the National Defense Service Medal.

Rear Admiral Donegan and his wife, the former Joanna Helms, have four children, Beth, John, Michael, and Thomas.

NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER



TECHNICAL DIRECTOR

PAUL ROGER WESSEL

Mr. Paul R. Wessel was born in Cape Girardeau, MO. He received his B.S. degree, magna cum laude, in Physics and Mathematics from Southeast Missouri State University in 1958 and his M.S. degree in Solid State Physics from the University of Maryland in 1962. In 1981 he received a diploma, with highest distinction, from the Naval War College Off-Campus Program.

From 1980 to 1983, Mr. Wessel was Head, Research and Technology Department, of the (then) Naval Surface Weapons Center (NSWC) Dahlgren, VA. In 1983 he was appointed Head, Combat Systems Department, NSWC. In this position he led the development of the Aegis Cruiser Combat System and the Tomahawk Cruise Missile control system.

In 1987 he was selected as Technical Director, Warfare Systems Architecture and Engineering Directorate, at the Space and Naval Warfare Systems Command. He served in that position until January 1992, when he was appointed Technical Director, Naval Command, Control and Ocean Surveillance Center.

Mr. Wessel's awards include the Meritorious Executive Rank Award and numerous Senior Executive Service Outstanding Performance Ratings.

He is married to the former Gwyn M. Mowrey and has three children, Melissa, David, and Tamara.

NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
ISE WEST COAST DIVISION
P.O. BOX 85137
SAN DIEGO, CA 92186-5137
(619) 524-2000

MISSION

To be the Navy's engineering and Fleet support center for assigned command, control and communications systems, ocean surveillance systems, and the integration of those systems which overarch multiplatforms.

PERSONNEL

Commanding Officer: CAPT Peter S. Pierpont, USN
Executive Director: Dr. Frank E. Gordon

Ext. 2000
Ext. 2000

	Civilian	Military
Total On Board (10/92)	1,095	17
FTP On Board (10/92)	1,090	
FTP Scientists & Engineers (10/92)	374	

LEADERSHIP AREAS

Shipboard communications
Shorebased communications
Command, control, communication, and intelligence (C³I)
Air traffic control and navigation

Submarine ESM
Surface ESM
Satellite communications
Depot operations
Automatic test engineering

FUNDING

(\$286 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	0.0	SPAWAR	46.4
6.2	0.0	NAVAIR	15.1
6.3a	0.0	NAVSEA	16.5
6.3b	0.0	NAVFAC	0.0
6.4	2.6	NAVSUP	3.5
6.5	0.0	OCNR	0.0
6.6	0.0	SSPO	0.0
Other RDT&E	0.0	DOD	6.0
O&MN	42.9	CINCPAC	2.4
APN	1.3	Other	<u>10.1</u>
OPN	37.6	Total	100
WPN	0.0		
SCN	3.2		
Other Navy	1.3		
All Other	0.1		
DBOF	4.9		
Other DOD	<u>6.1</u>		
Total	100		

PROPERTY

Land	Acquisition Costs	Buildings
Owned 3 acres	Equipment \$62 Million	RDT&E 237,071 ft ²
		Administrative 261,389 ft ²
		Other 531,976 ft ²

**NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
ISE WEST COAST DIVISION**



**COMMANDING OFFICER
CAPTAIN PETER S. PIERPONT, USN**

Captain Peter S. Pierpont was born in Boston, MA. In 1963 he enlisted in the Navy Air Reserve Forces, and continued to participate actively while attending the University of Vermont.

In 1967 he received a B.A. degree in Languages and a commission through the Reserve Officer Candidate Program. He is a graduate of the Naval Postgraduate School, where he received an M.S. degree in Electrical Engineering.

Captain Pierpont has served aboard the following afloat commands: USS *Richmond K. Turner* (CG 30), USS *Buchanan* (DDG 14), USS *Hepburn* (FF 1055), and USS *Niagara Falls* (AFS 3). He served as Executive Officer aboard USS *Kansas City* (AOR 3). Ashore assignments have included the Naval Academy; the Office of Naval Technology; and the Naval Sea Systems Command, where he served as Project Manager for the AN/SLQ-32 Electronic Warfare System. He has attended the Defense Systems Management College at Fort Belvoir, VA. Captain Pierpont also served as Commanding Officer, Naval Electronic Systems Engineering Center, Vallejo, CA, and as Commanding Officer, Naval Electronic Systems Engineering Center, San Diego.

Captain Pierpont's awards include the Legion of Merit, the Navy Meritorious Service Medal, the Navy Commendation Medal (five awards), the Reserve Meritorious Service Medal, and numerous campaign and service medals. He is currently Commanding Officer of the Naval Command, Control and Ocean Surveillance Center (NCCOSC) In-Service Engineering West Coast Division, San Diego, which was formed from the consolidation of the engineering centers at San Diego and Vallejo.

Captain Pierpont has a daughter, Krista, and a son, Peter, Jr.

**NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
ISE WEST COAST DIVISION**



EXECUTIVE DIRECTOR

DR. FRANK E. GORDON

A native of Kansas, Dr. Frank E. Gordon received his B.S. degree in Mechanical Engineering from the University of Kansas in 1967. He received a Doctor of Engineering degree from the University of Kansas in 1971 with the support of a fellowship from the National Aeronautics and Space Administration. He is a member of Pi Tau Sigma.

Dr. Gordon began his federal service as a mechanical engineer at the Naval Ocean Systems Center (NOSC), now the Naval Command, Control and Ocean Surveillance Center, Research, Development, Test and Evaluation Division (NRaD). His initial assignment was conducting a study of test facility requirements for the Trident Missile Underwater Launch Test Program. Eight months later, he was promoted to Head, Project Branch, supervising approximately 25 engineers and technicians in the design and fabrication of special test facilities.

In 1973 Dr. Gordon was selected to head the Test Division at NOSC, where test and evaluation operations were conducted on a number of Navy weapon systems, including the Encapsulated Harpoon, Trident D-5, and Tomahawk missiles and the Mk 46 and Mk 50 torpedoes. He served on the source-selection board for the Tomahawk and the Antisubmarine Warfare Stand-Off Weapons, and he participated in development of the test procedures for the Surface Ship Radiated Noise Measurement Range. He was also manager of a project to provide test ranges and facilities for the Republic of Korea.

In 1979 Dr. Gordon was appointed the Navy's strategist for Undersea Warfare Weaponry Technology Strategy. He assembled a team of Navy and university laboratory personnel to prepare a strategy covering torpedo guidance and control, torpedo propulsion, mines, warheads, fire control, countermeasures systems, and underwater explosive effects.

Dr. Gordon was selected in 1982 to head Central Staff, NOSC's administrative department. In 1986 he became Head of NOSC's Antisubmarine Warfare (ASW) Department. In this position he supervised over 400 scientists and engineers in the development and testing of major ASW weapon systems, including the Mk 46 and Mk 50 torpedoes, the Vertical Launch Antisubmarine Rocket (ASROC), and the Mk 116 ASW Control Systems.

In May 1992 Dr. Gordon became Executive Director of the Naval Command, Control and Ocean Surveillance Center (NCCOSC) In-Service Engineering West Coast Division, headquartered in San Diego.

Dr. Gordon is a member of the Senior Executive Service. He has authored and coauthored a number of publications and holds three patents jointly with other co-inventors.

Dr. Gordon and his wife, Lyn, have two children, Jennifer and Matthew.

NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
RDT&E DIVISION
SAN DIEGO, CA 92152-5000
(619) 553-1111 DSN 553-1111

MISSION

To be the Navy's engineering and fleet support center for assigned command, control and communications systems, ocean surveillance systems and the integration of those systems which overarch multiplatforms.

PERSONNEL

Commanding Officer: CAPT James D. Fontana, USN Ext. 3000
 Executive Director: Mr. Richard T. Shearer Ext. 3010

	Civilian	Military
Total On Board (10/92)	3,298	390
FTP On Board (10/92)	3,269	
FTP Scientists & Engineers (10/92)	1,784	

LEADERSHIP AREAS

Command, control, and communication systems	Ocean engineering
Command, control, and communication systems countermeasures	Navigation support
Ocean surveillance systems	Marine mammals
Command, control, and communication modeling and analysis	Integration of space communication and surveillance systems

FUNDING

(\$630.4 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	1.5	SPAWAR	27.8
6.2	9.1	NAVAIR	4.1
6.3a	2.6	NAVSEA	22.9
6.3b	8.3	NAVFAC	0.2
6.4	7.9	NAVSUP	0.0
6.5	2.1	OCNR	11.4
6.6	9.6	SSPO	0.8
Other RDT&E	16.2	DOD	32.0
O&MN	17.1	Other Gov't	0.4
APN	0.5	Private Parties	0.1
OPN	11.7	Other Navy	0.3
WPN	4.5	Total	100
SCN	3.9		
Other Navy	0.9		
All Other	4.1		
Total	100		

PROPERTY

Land	Acquisition Costs	Buildings
Owned 2,246 acres	Real Property \$90 Million Equipment \$128 Million	RDT&E 1,519,229 ft ² Administrative 287,184 ft ² Other 263,104 ft ²

**NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
RDT&E DIVISION**



COMMANDING OFFICER

CAPTAIN JAMES D. FONTANA, USN

Captain James D. Fontana, a native of Detroit, MI, graduated from the Naval Academy in 1963. His initial assignment was aboard USS *Carpenter* (DD 825). He later served aboard USS *Luce* (DLG 7, now DDG 38). In 1967, after graduating from the Naval Destroyer School at Newport, RI, he served as Weapons Officer aboard USS *Agerholm* (DD 826).

Captain Fontana received an M.S. degree in Physics from the Naval Postgraduate School in 1971. He graduated from the Armed Forces Staff College, Norfolk, in 1972.

The following year, Captain Fontana served in Vietnam with the Naval Advisory Group, Saigon, ending his tour on the last day of the U.S. withdrawal timetable. During 1974 and 1975, he served as Executive Officer aboard USS *Decatur* (DDG 31).

From 1975 to 1979 Captain Fontana was assigned to Headquarters, Defense Nuclear Agency, Washington, DC, serving as Nuclear Development Officer and subsequently as Executive Assistant to the Deputy Director.

Captain Fontana commanded the San Diego-based guided missile destroyer USS *Lynde McCormick* (DDG 8) from 1979 to 1981. He then served on the staff of Commander, Sixth Fleet, homeported in Gaeta, Italy, as Current Operations Officer and later as Assistant Chief of Staff for Strategy and Tactics.

From 1984 to 1986 he headed the Nuclear Branch in the Office of the Director of Research, Development, Test and Evaluation, Office of the Chief of Naval Operations. Concurrently, Captain Fontana was responsible for establishing the Navy research program in support of the President's Strategic Defense Initiative. From 1986 to 1989 he served as Program Manager, Strategic Defense Systems, Space and Naval Warfare Systems Command. He assumed command of the Naval Ocean Systems Center (now the Naval Command, Control and Ocean Surveillance Center RDT&E Division) in September 1989.

Captain Fontana's decorations include the Legion of Merit, the Defense Meritorious Service Medal, the Meritorious Service Medal, the Joint Service Commendation Medal, the Navy Commendation Medal (gold star with Combat V), and the Navy Achievement Medal. He also was awarded the Vietnamese Distinguished Service Medal, the Vietnamese Honor Medal, and the Expert Pistol Medal. Captain Fontana serves on the Board of Directors of the San Diego Oceans Foundation and the Los Angeles Chapter of the American Defense Preparedness Association.

He is married to the former Patricia E. Smith. They have three children: Whitney, Julie, and Tim.

**NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
RDT&E DIVISION**



EXECUTIVE DIRECTOR

RICHARD T. SHEARER

Mr. Richard T. Shearer, a native of Glasgow, Scotland, received a National Certificate in Mechanical Engineering from the Royal College of Science and Technology, Glasgow, in 1957, and earned his bachelor's and master's degrees in Electrical Engineering from George Washington University, Washington, DC, in 1964 and 1969, respectively.

Mr. Shearer was a draftsman for Mechans LTD, Glasgow, from 1952 until 1957, at which time he became a U.S. Army draftee assigned to the Department of Radiobiology at the Walter Reed Army Institute of Research. Following his Army service he held the position of Draftsman at Bell Telephone Laboratories, NJ, and then at Morris Engineering Inc., Washington, DC, from 1957 to 1961; Inspector and Data Processor for H. G. Nottingham and Associates, VA, in 1962; and Engineering Technician and later Electronic Engineer at Harry Diamond Laboratories, Army Materiel Command, from 1963 to 1965. Mr. Shearer also worked as an Electronic Engineer at the Professional Development Center, Naval Ordnance Laboratory, from 1965 to 1966; at the Professional Development Center, U.S. Naval Air Station, from 1966 to 1967; at Naval Electronic Systems Command from 1967 to 1969; at the Satellite Engineering Division (then Satellite Communications Division) Defense Communications Agency, from 1969 to 1970; at the Communications Program Office, Naval Electronics Laboratory Center (NELC), from 1970 to 1971; and at the Satellite Program Office NELC, from 1971 to 1972. From 1972 to 1975 he was Head, Telecommunications Systems, Engineering Group, NELC; and from 1975 to 1977 he was a Supervisory Electronics Engineer, Systems Analysis Group, Naval Warfare Effectiveness, at the Naval Ocean Systems Center (NOSC) (formerly NELC). At NOSC Mr. Shearer was Head Supervisor, Electronics Engineer, Intelligence Office from 1977 to 1980.

At NOSC he served between 1980 and 1988 as Manager of the Intelligence Office, after which he served as Director, Systems Planning Group and Director, Planning, Intelligence and Analysis Office until 1991. From 1991 to 1992 he was Acting Technical Director of the Naval Command, Control and Ocean Surveillance Center RDT&E Division. In February 1992 he became the facility's Executive Director.

Mr. Shearer's awards include 14 Outstanding Performance Awards, three Superior Performance Awards, the Department of Navy Superior Civilian Service Award, and the Lauritsen Bennett Award (NOSC's highest honor). He received the SES Performance Award in 1992. Mr. Shearer is a member of the Board of Directors of the San Diego Chapter of the Armed Forces Communications and Electronics Association (AFCEA).

He and his wife, the former Glenna Gay Mesnier, have two children: Alison and Alexander.

**NAVAL ELECTRONIC SYSTEMS ENGINEERING CENTER
PORTSMOUTH
P.O. BOX 55
PORTSMOUTH, VA 23705
(804) 396-3131 DSN 961-3131**

MISSION

To provide electronic material support for systems and equipments for which the Commander, Command, Control and Ocean Surveillance Center, is assigned responsibility; and to perform such other functions as may be directed by the Commander, Naval Command, Control and Ocean Surveillance Center.

PERSONNEL

Commanding Officer: CAPT Michael T. Gehl, USN Ext. 3131
Executive Director: Mr. Eugene G. Newman Ext. 3131

	Civilian	Military
Total On Board (10/92)	418	16
FTP On Board (10/92)	417	
FTP Scientists & Engineers (10/92)	166	

LEADERSHIP AREAS

Command, control, and communication (C³) systems
Shore communications systems
Shipboard communications systems
Satellite communications systems
Intelligence communications/information processing
Shore command and control
Shipboard command and control
Information systems security

Command, control, and communication systems countermeasures
Submarine electronic support measures
Surface electronic support measures
Electronic warfare
Ocean surveillance systems
Integrated undersea surveillance system (IUSS)
Surface and aerospace surveillance
Other
Depot management East
Non-tactical data systems information networks

FUNDING

(\$170.6 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.3a	0.1	SPAWAR	59.1
6.4	0.5	NAVSEA	14.3
6.6	2.0	NAVSUP	7.4
O&MN	37.7	CNO	2.5
OPN	43.0	Other Navy	6.6
SCN	2.9	Other	6.6
Other Navy	1.6	CINCLANT	3.5
All Other	2.9	Total	100
DBOF	9.3		
Total	100		

PROPERTY

Land		Acquisition Costs	Buildings	
Owned	200 acres	Equipment \$37 Million	Administrative	40,493 ft ²
			Other	384,320 ft ²

NAVAL ELECTRONIC SYSTEMS ENGINEERING CENTER, PORTSMOUTH



COMMANDING OFFICER

CAPTAIN MICHAEL T. GEHL, USN

Captain Michael T. Gehl was born in Denison, IA. He received his B.S. degree in Electronic Engineering from Iowa State University, Ames, IA, in 1972 and his M.S. degree in Computer Science from the Naval Postgraduate School in 1982.

From 1971 to 1975 Captain Gehl served as Main Propulsion Assistant aboard USS *Henderson* (DD 785) and USS *Jouett* (CG 29). After attending Surface Warfare Officers School in 1976, he served as Operations Officer aboard USS *Lynde McCormick* (DDG 8) and later as Operations and Scheduling Officer with Destroyer Squadron 27. After attending the Naval Postgraduate School, Captain Gehl held several positions in the Naval Electronic Systems Command (later the Space and Naval Warfare Systems Command), including Software Engineering Branch Head, Computer Resources Division Head, and Systems Engineering Division Head. From 1986 to 1989 he served as Command, Control, Communications and Intelligence Program Officer at the Office of Naval Research. Between 1989 and 1990 he served as Electronic Maintenance Officer with Commander, Naval Logistics Pacific, and later with Commander in Chief, Pacific Fleet. After serving for 2 years as Combat Systems Maintenance Officer, Commander in Chief, Pacific Fleet, Captain Gehl was named Commanding Officer, Naval Electronic Systems Engineering Center, Portsmouth.

Captain Gehl's awards include the National Defense Service Medal, the Vietnam Service Medal, the Navy Commendation Medal, and the Meritorious Service Medal.

He and his wife, the former Sharon Lukacovic, have two sons: Mathias and David.

NAVAL ELECTRONIC SYSTEMS ENGINEERING CENTER, PORTSMOUTH



EXECUTIVE DIRECTOR

EUGENE GRAY NEWMAN

Mr. Eugene Gray Newman, a native of Goldsboro, NC, graduated from Virginia Polytechnic Institute, Blacksburg, VA, in 1960 with a bachelor's degree in Electronic Engineering. He served as an Electronic Engineer at Western Electric Co. from 1960 to 1963 and at Baxter Laboratories from 1963 to 1964.

Before being named Executive Director of the Naval Electronic Systems Engineering Center, Portsmouth, in 1985, Mr. Newman held the positions of Head, Electronic Warfare Department; Head, Communications Security Department; and Head, Fleet Communications Department at that facility.

Mr. Newman was instrumental in the development of solid-state amplifiers and integral power supply traveling-wave tubes for electronic warfare systems. He also engineered an automated computer-controlled system for communications software development and originated the concept of providing remote technical assistance to afloat units through integration of data provided by the ship by way of radio link with computer analysis software. Additionally, Mr. Newman initiated a concept of automated text/graphics processing that will include automated engineering review of drawings and technical manuals.

His awards include a Commendation from the President of the U.S. (1976), the Navy Distinguished Civilian Service Award (1989), and the Navy Meritorious Civilian Service Award (1986 and 1992).

NAVAL ELECTRONIC SYSTEMS ENGINEERING CENTER, CHARLESTON



COMMANDING OFFICER

CAPTAIN ANTHONY LENGERICH, USN

Captain Anthony Lengerich was born in Redlands, CA, and graduated from the University of Colorado, Boulder, CO, in 1971 with a bachelor's degree in Political Science. He received a master's degree in Communications Engineering from the Naval Postgraduate School in 1982.

Captain Lengerich served as Communications Officer aboard USS *Gurke* (DD 783) from 1971 to 1973, following which he served on the staff of the Commander, 7th Fleet. In 1974 he was Communications Operations Officer on the staff of the Commander in Chief, U.S. Naval Forces, Europe. Captain Lengerich was a student at Surface Warfare Officers School, Newport, RI, during 1976 before becoming Operations Officer aboard USS *Badger* (FF 1071). From 1978 to 1980 he served with Destroyer Squadron 13. Between 1980 and 1983 he was a student at the Naval Postgraduate School and at FCTCL, Damneck, VA. He then held the position of Assistant Surface Operations with Carrier Group 2.

After attending EDO School in Vallejo, CA, in 1984, Captain Lengerich became Head of Joint Tactical Information Distribution System (JTIDS) Integration, PMW 159, and later Project Officer, C²P of PMW 159. From 1988 to 1990 he was Head, Force Systems Engineering, at Space and Naval Warfare Systems Command. After attending Defense Systems Management College, Ft. Belvoir, VA, in 1990, he served as Head, Afloat Planning Systems (PMA-281) until 1992. Captain Lengerich was named Commanding Officer of the Naval Electronic Systems Engineering Center, Charleston, in 1992.

Captain Lengerich's awards include the Navy Commendation Medal (1978, 1980, 1984) and the Meritorious Service Medal (1988, 1990, 1992).

He and his wife, the former Linda Kay Isom, have two children: James and Jennifer.

NAVAL ELECTRONIC SYSTEMS ENGINEERING CENTER, CHARLESTON



EXECUTIVE DIRECTOR

MICHAEL REICH

Mr. Michael Reich, a native of New York City, graduated from the City College of New York in 1971 with a degree in Electrical Engineering. He holds an M.S.A. degree in Administration of Science and Technology from George Washington University, Washington, DC, and is a graduate of the Federal Executive Institute's Executive Excellence Program.

Mr. Reich began his career as a technician in the Navy and has had varied electronics experience both in the Navy and in private industry. In 1971 he joined the Naval Electronic Systems Engineering Activity, St. Inigoes, MD, as a project engineer. In this role he was instrumental in developing and testing many major equipment programs.

Mr. Reich served as Technical Services Department Director at the Naval Electronic Systems Engineering Activity, St. Inigoes, from 1974 until 1984, when he was named Executive Director of the Naval Electronic Systems Engineering Center, Charleston.

He was awarded the Navy Meritorious Civilian Service Award in 1987 and the Navy Superior Civilian Service Award in 1992.

Mr. Reich is a member of the Institute of Electrical and Electronic Engineers; Federal Executive Institute Alumni; Charleston's Trident Economic Development Board Committee for Technical Development; the Citadel (military college) Engineering 2000 Steering Committee; and Toastmasters International. He is a member of the Space and Naval Warfare Systems Command Field Activity Study Team and the Navy Sexual Harassment Project Matrix Team.

Mr. Reich and his wife, the former Bobbie Meritz, have three sons: Andy, Richie, and Evan.

NAVAL ELECTRONIC SYSTEMS ENGINEERING ACTIVITY, ST. INIGOES
ST. INIGOES, MD 20684-0010
(301) 862-5173 DSN 326-5173

MISSION

To provide electronics material support for systems and equipment for which the Naval Command, Control and Ocean Surveillance Center is assigned responsibility; and to perform such other functions as may be directed by the Commander, Naval Command, Control and Ocean Surveillance Center.

PERSONNEL

Commanding Officer: CAPT Frank Schwikert, USN Ext. 8004
 Executive Director: Mr. Robert E. Waxman Ext. 8009

	Civilian	Military
Total On Board (10/92)	381	44
FTP On Board (10/92)	380	
FTP Scientists & Engineers (10/92)	178	

LEADERSHIP AREAS

Command, control, and communications systems
 Shipboard communications systems
 Mobile communications systems
 Intelligence communications/information processing
 Shore command and control systems
 Shipboard command and control
 Information systems security
 Air traffic control
 Target recognition
 Special operating forces

Ocean surveillance systems
 Integrated undersea surveillance systems support
 Other
 Physical security systems
 Electromagnetic environmental effects
 Computer-aided logistics support-interactive electronic technical manuals
 General-purpose electronic test equipment
 Foreign military sales
 Tactical computers
 Mission systems integration for oceanographic ships

FUNDING

(\$335.4 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	0.0	SPAWAR	57.9
6.2	0.0	NAVAIR	17.0
6.3a	0.0	NAVSEA	8.8
6.3b	0.4	OCNR	0.0
6.4	4.4	SSPO	0.0
6.5	0.0	DISA (DCA) Wash, DC	1.6
6.6	1.1	HQAFSOC Hurlburt, FL	1.1
Other RDT&E	0.5	Other DOD	3.6
O&MN	16.3	Other Navy	9.0
APN	0.0	All Other	<u>1.0</u>
OPN	18.7		100
WPN	0.0		
SCN	25.9		
Other Navy	0.9		
All Other	1.0		
DBOF	1.6		
AFMSE	18.1		
Other DOD	<u>11.1</u>		
Total	100		

PROPERTY

Land	Acquisition Costs	Buildings
Owned 852 acres	Real Property \$57 Million	RDT&E 392,801 ft ²
	Equipment \$45 Million	Administrative 217,777 ft ²
		Other 338,617 ft ²

NAVAL ELECTRONIC SYSTEMS ENGINEERING ACTIVITY, ST. INIGOES



COMMANDING OFFICER

CAPTAIN FRANK SCHWIKERT, USN

Captain Frank Schwikert was born in Wilmington, DE. He received a bachelor's degree in Aeronautical Engineering from the Georgia Institute of Technology, Atlanta, GA, in 1968; a master's degree in Aeronautical Engineering from the Naval Postgraduate School in 1974; and a master's degree in Systems Management from the University of Southern California in 1982.

From 1968 to 1971 Captain Schwikert served in RA-3B and EA-6B aircraft, following which he served as Electronic Warfare (EW) Project Officer at the Naval Air Systems Command (NAVAIR). After attending the Naval Postgraduate School, he was on Fleet tour from 1975 to 1977. He attended Test Pilot School in 1978 and in 1979 became head of the Electronic Warfare Branch. From 1981 to 1984 he served as Program Manager, Advanced Space Systems, at the Space and Naval Warfare Systems Command. In 1985 he became TACAIR EW Program Manager at NAVAIR. He attended the Industrial College of the Armed Forces in 1987.

From 1988 to 1991, Captain Schwikert served as Director, Systems Engineering Test Directorate, Naval Air Test Center, Patuxent River, MD. He was named Commanding Officer, Naval Electronic Systems Engineering Activity, St. Inigoes, in June 1991.

Captain Schwikert's awards include three Air Medals, the Navy Commendation Medal, the Defense Meritorious Service Medal, and the Meritorious Service Medal.

He and his wife, the former Pamela Malcolm, have two children: Wendy and Richard.

NAVAL ELECTRONIC SYSTEMS ENGINEERING ACTIVITY, ST. INIGOES



EXECUTIVE DIRECTOR

ROBERT E. WAXMAN

Mr. Robert E. Waxman graduated from the Air Force Navigation School in 1944. He received his bachelor's degree in Electrical Engineering from the University of Maryland in 1950 and completed the master's program in Engineering Administration at George Washington University in 1974.

Mr. Waxman began his career in naval electronics in 1951 as Project Engineer in the Propagation Section, Radio and Communications Branch, Electronic Test Division, at the Naval Air Test Center (NATC). After four years he moved to the Navy Air Navigation Electronic Project (NANEP—one of the former names of the Naval Electronic Systems Engineering Activity (NESEA)), where he was in charge of test and evaluation projects on radar, identification friend or foe, and air radar traffic control systems. He has held the position of Technical/Executive Director of NESEA since 1964.

Mr. Waxman was awarded the Navy Superior Civilian Service Award in 1980 and again in 1987. He received a Certificate of Special Congressional Recognition in 1987. In 1992 he received the Meritorious Civilian Service Award.

He and his wife, the former Ruth Heilbrunn, have five children: Bruce, David, Eric, Julie, and Paul.

NAVAL ELECTRONIC SYSTEMS SECURITY ENGINEERING CENTER, WASHINGTON, DC
3801 NEBRASKA AVENUE NW
WASHINGTON, DC 20393-5454
(202) 282-0609 DSN 292-0609

MISSION

To provide engineering support and technical services on cryptographic, cryptologic, and signal security systems and equipment; to provide life-cycle electronics material support for systems and equipment under the cognizance of the Naval Command, Control and Ocean Surveillance Center; and to perform such other functions as may be directed by the Commander, Naval Command, Control and Ocean Surveillance Center.

PERSONNEL

Commanding Officer: CDR Dennis M. Dwyer, USN Ext. 0609
 Technical Director: Mr. Robert P. Kappler Ext. 0653

	Civilian	Military
Total On Board (10/92)	142	45
FTP On Board (10/92)	141	
FTP Scientists & Engineers (10/92)	45	

LEADERSHIP AREAS

Command, control, and communication (C³) systems C³ modeling/analysis

FUNDING

(\$26.7 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.1	0.0	SPAWAR	96.3
6.2	0.0	DOD	3.7
6.3a	0.0	Total	100
6.3b	0.0		
6.4	3.4		
6.5	0.0		
6.6	0.0		
Other RDT&E	0.0		
O&MN	77.9		
APN	0.0		
OPN	3.0		
WPN	0.0		
SCN	0.0		
Other Navy	0.0		
All Other	15.7		
Total	100		

PROPERTY

Land		Acquisition Costs	Buildings	
Owned	0 acres	Equipment \$3 Million	RDT&E	6,600 ft ²
			Administrative	34,700 ft ²
			Other	39,500 ft ²

NAVAL ELECTRONIC SYSTEMS SECURITY ENGINEERING CENTER



COMMANDING OFFICER

COMMANDER DENNIS M. DWYER, USN

Commander Dennis M. Dwyer was born in Philadelphia, PA. After graduating from the Naval Academy in 1973, he served as Assistant Combat Information Center/Naval Tactical Data System (CIC/NTDS) Officer and Communications Officer aboard USS *Luce* (DDG 38). This tour was followed by an assignment at the Naval Postgraduate School in 1976, where he was designated an Engineering Duty Officer. He graduated in 1978 with a master's degree in Communications Engineering.

In early 1979 Commander Dwyer reported to the Naval Sea Systems Command, Combat Systems Directorate, as an NTDS Project Officer and Data Links Manager. From 1981 to 1983 he served as Shipboard Integration Manager for the Joint Tactical Information Distribution System (JTIDS) Project in the Naval Electronic Systems Command. Commander Dwyer was then assigned as an instructor and Basic Course director at the Engineering Duty Officer School, Mare Island, Vallejo, CA.

In 1985 he reported as Assistant Engineering Officer and Combat Systems Officer in the Office of the Supervisor of Shipbuilding, Conversion and Repair, Newport News, VA. In 1987 he was assigned as the Combat Systems Officer for the Naval Sea Systems Command Detachment, Fleet Support, Atlantic.

In 1988 Commander Dwyer reported to Norfolk Naval Shipyard, where he served as Combat Systems Officer, Planning and Estimating Superintendent, and Planning Officer. He assumed command of the Naval Electronic Systems Security Engineering Center in August 1991.

Commander Dwyer is married to the former Eva Cicero. They have a daughter, Shannon, and a son, Kevin.

NAVAL ELECTRONIC SYSTEMS SECURITY ENGINEERING CENTER



TECHNICAL DIRECTOR

ROBERT PAUL KAPPLER

Mr. Robert Paul Kappler was born in Moberly, MO. He received his B.S.E.E. in Electronics from the University of Missouri at Columbia in 1961 and that year began his federal career as an Electronics Engineer working for the Department of the Army at White Sands Missile Range, NM. In 1970 he earned an M.B.A. in Production Management from the University of Missouri, and in 1971 he became a Program Manager for the Department of the Army at the Pentagon in Washington, DC.

In 1974 Mr. Kappler joined the Department of the Navy as Supervisory Electronics Engineer at the Naval Electronic Systems Security Engineering Center (NESSEC) in Washington, DC. He was appointed Technical Director of NESSEC in 1982.

Mr. Kappler was awarded the Superior Civilian Service Award in 1986. He has also received numerous performance awards.

Mr. Kappler is married to the former Marilyn Sue Lankford. They have three children: Christiana, David, and Carolyn.

**COMMANDER
NAVAL SEA SYSTEMS COMMAND**



VICE ADMIRAL KENNETH C. MALLEY, USN

Vice Admiral Kenneth C. Malley was born in Newark, NJ. He enlisted in the Navy in 1952 and in 1953 he entered the Naval Academy. He was commissioned an Ensign in 1957, following which he served 3 years at sea with the Destroyer Force Atlantic Fleet. He then attended the Naval Postgraduate School, where he received an M.S. degree in Electrical Engineering. In 1963 he returned to sea as Weapons Officer aboard USS *Farragut* (DLG 6, now DDG 37). Designated Ordnance Engineering Duty Officer in 1964, he was assigned to the Bureau of Naval Ordnance and was Project Officer for the Navy's first digital track-while-scan gun fire control system, GFCS Mk 86.

In 1967 Vice Admiral Malley was transferred to the Strategic Systems Program Office for duty with the Naval Plant Representative Office in Sunnyvale, CA, where he worked on the Polaris and Poseidon missile programs. In 1970 he was reassigned to the Strategic Systems Program Office in Washington, DC, as Head of the Engineering Section of the Missile Branch, and was heavily involved in establishing the technical and contractual requirements for the Trident I (C-4) missile subsystem. In 1975 he was assigned to the Naval Ordnance Station, Indian Head, MD, as Support Director.

In 1976 Vice Admiral Malley returned to the Strategic Systems Program Office. He served as head of the Missile Branch until August 1980, when he became the Deputy Technical Director. In 1980 he was assigned the position of Technical Director, Strategic Systems Programs. In that assignment, he was the senior technical manager for the development, production, and operational support of the Navy's strategic weapon systems, Poseidon, Trident I, and Trident II (D-5).

In 1985 Vice Admiral Malley assumed the duties of Director, Strategic Systems Programs, with responsibility for all aspects of the research, development, production, and operational support of the Navy's Fleet Ballistic Missile Weapon Systems, which include Poseidon and Trident missiles and their associated submarine equipments. He was also the U.S. Project Officer responsible for managing U.S. Government activities in support of the British Polaris/Trident Force. Vice Admiral Malley assumed command of the Naval Sea Systems Command in June 1991.

Vice Admiral Malley's awards include the Distinguished Service Medal, the Legion of Merit (one gold star) for his efforts associated with the Trident I and Trident II weapon systems, the Meritorious Service Medal for contributions to the Poseidon development program, the Navy Achievement Medal, and the National Defense Service Medal (two bronze stars).

Vice Admiral Malley is married to the former Catherine M. (Peg) Potter. They have two sons, William and Paul.

**VICE COMMANDER
NAVAL SEA SYSTEMS COMMAND**



REAR ADMIRAL GEORGE STERNER, USN

Rear Admiral George Sterner is a native of Ambler, PA. He was commissioned in 1962 following graduation from Pennsylvania State University (Naval Reserve Officers Training Corps) with a B.S. degree, magna cum laude, in Aerospace Engineering. At his first duty stations, he received nuclear power training and basic officer submarine training.

He reported to his first ship, USS *Tullibee* (SSN 597), in 1964, serving as Weapons Officer, Supply Officer, and Damage Control Assistant. From 1966 to 1968 he attended the Naval Postgraduate School, where he earned his M.S. degree, cum laude, in Operations Analysis. His follow-on assignments included Weapons Officer aboard USS *Kamehameha* (SSBN 642) (Gold) and Engineer Officer in the commissioning crew of USS *Archerfish* (SSN 678). From 1974 to 1975, Rear Admiral Sterner served with the Naval Nuclear Propulsion Examining Board on the staff of Commander in Chief, U.S. Atlantic Fleet. He was assigned as Executive Officer aboard USS *Henry L. Stimson* (SSBN 655) (Gold) from 1976 to 1978.

Rear Admiral Sterner commanded USS *Sturgeon* (SSN 637) from 1979 to 1982, during which time he completed a Mediterranean deployment and several special operations. In 1982 he reported to the USS *Florida* (SSBN 728) precommissioning unit at Electric Boat and assumed command of the Gold crew when the ship was commissioned in June 1983.

In 1984 he reported to the office of the Deputy Chief of Naval Operations (Submarine Warfare) and served as Branch Head, Submarine Tactical Weapons, for 2 years. During this period, he also served briefly as Executive Assistant for OP-02 before attending the Advanced Management Program at the Harvard Graduate School of Business. In 1986 he attended the program manager course at Defense Systems Management College, Fort Belvoir, VA.

Rear Admiral Sterner served as Mk 48/Mk 48 ADCAP Torpedo Program Manager from 1987 to 1989. He assumed duties as Assistant Deputy Commander for Combat System Engineering and Technology under Commander, Naval Sea Systems Command, in January 1990. In September 1991 he became Program Executive Officer for Submarine Combat and Weapons Systems. He reported to his current assignment as Vice Commander, Naval Sea Systems Command, in September 1992.

Rear Admiral Sterner's decorations include the Legion of Merit with two gold stars, the Meritorious Service Medal with two stars, and the Navy Commendation Medal with gold star.

He is married to the former Louise Terpak. They have two children, Susan and Robert.

NAVAL SURFACE WARFARE CENTER
2531 JEFFERSON DAVIS HWY
ARLINGTON, VA 22242-5160
(703) 602-0632 DSN 332-0632

MISSION

Operate the Navy's full-spectrum research, development, test and evaluation, engineering, and Fleet support center for ship hull, mechanical and electrical systems, surface ship combat systems, coastal warfare systems, and other offensive and defensive systems associated with surface warfare.

PERSONNEL

Commander: RADM Edward S. McGinley II, USN Ext. 152
 Technical Director: Dr. Ira M. Blatstein Ext. 172

	Civilian	Military
Total On Board (10/92)	22,615	642
FTP On Board (10/92)	22,114	
FTP Scientists & Engineers (10/92)	8,476	

LEADERSHIP AREAS

Surface warfare modeling and analysis	Surface and undersea vehicle hull, machinery, propulsors, and equipment
Surface ship combat and combat control systems	Platform systems integration
Surface ship electronic warfare	Strategic targeting support (including fire control, targeting, and re-entry systems)
Surface ship electromagnetic and electro-optic reconnaissance, search, and track systems	Amphibious warfare systems
Surface ship weapon systems (including shipboard missile integration)	Special warfare systems
Ship vulnerability and survivability (including submarine HM&E)	Warheads (explosives and energetic materials)
Ship active and passive signatures (including submarine HM&E)	Mines, mine countermeasures, and mine clearance systems

FUNDING

(\$3,049.9 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.1	0.7	SPAWAR	1.2
6.2	4.7	NAVAIR	6.4
6.3a	1.0	NAVSEA	50.0
6.3b	11.1	NAVFAC	0.3
6.4	4.8	NAVSUP	1.2
6.5	0.9	OCNR	6.0
6.6	2.8	SSPO	2.9
Other RDT&E	4.5	Other DOD	5.3
O&MN	22.5	Other Navy	8.2
APN	0.9	Other Gov't	0.2
OPN	11.8	Private	0.2
WPN	4.7	Direct Cite	5.5
SCN	10.9	Army	1.8
Other Navy	3.5	Air Force	0.5
All Other	10.2	Other	1.8
FMS	1.3	Marine Corps	1.7
Air Force	0.5	NELO	2.6
Army	1.7	NAV SPEC Warfare Command	0.3
Direct Cite	1.5	NEODTC	0.1
		PEO	2.3
		DRPM Aegis	1.5
Total	100	Total	100

PROPERTY

Land		Acquisition Costs		Buildings	
Owned	72,398 acres	Real Property	\$4,249 Million	RDT&E	9,036,000 ft ²
		Equipment	\$514 Million	Administrative	2,844,000 ft ²
				Other	941,000 ft ²

NAVAL SURFACE WARFARE CENTER



COMMANDER

REAR ADMIRAL EDWARD S. MCGINLEY II, USN

Rear Admiral Edward S. McGinley was born in Allentown, PA. He entered the Naval Academy after 1 year at Pennsylvania State University, where he majored in physics. After graduating from the Naval Academy in 1961, Rear Admiral McGinley entered the submarine service, eventually serving on three submarines.

Rear Admiral McGinley was designated an Engineering Duty Officer in 1967. He graduated from the Massachusetts Institute of Technology in 1970 with master's and engineer's degrees in Naval Architecture and Marine Engineering. He then reported to the Naval Safety Center in Norfolk as Head of the Submarine Systems Analysis Division. In 1972 he received a master's degree in Industrial Management from George Washington University.

In early 1973 Rear Admiral McGinley reported to the Norfolk Naval Shipyard, where he served as a ship superintendent and as Submarine Planning Officer. In 1976 he became Repair Officer of USS *Simon Lake* (AS 33) in Rota, Spain, and later oversaw the overhaul of that submarine at Charleston Naval Shipyard. In 1978 he transferred to that shipyard and served as Head, Nonnuclear Test Branch, Assistant Repair Officer (Submarines), Repair Officer, and Production Officer. While there, he also was selected for and attended the Executive Program at the University of Virginia. In 1983 Rear Admiral McGinley reported to Mare Island Naval Shipyard as Production Officer. He subsequently commanded the Norfolk Naval Shipyard from 1987 to 1990, after which he was promoted to flag rank. During his tenure at the shipyard, it won the Secretary of the Navy Environmental Protection Award for 1987, the Office of Management and Budget Quality Improvement Prototype Award for 1988, the Institute of Industrial Engineers Quality and Productivity Award for 1989, and the Senate Productivity Award for Continuous Improvement in 1990. After his shipyard command, Rear Admiral McGinley was assigned to Hawaii as Pacific Fleet Maintenance Officer, in charge of upkeep, repair, and modernization of all fleet ships, submarines, and aircraft. During this time, all types of fleet maintenance activities began to work interactively, in a form of mutual local support that greatly increased both readiness and productivity. In 1993, he was assigned command of the Naval Surface Warfare Center.

His service decorations include the Legion of Merit and Meritorious Service Medal (with gold star), among others. He is included in "Who's Who in America." Rear Admiral McGinley has held several offices in the American Society of Naval Engineers. He is a member of the honorary societies of Sigma Xi and Tau Beta Pi.

Rear Admiral McGinley and his wife, the former Connie Lee Mayo of Norfolk, VA, have two children: Amanda, who is an industrial engineer employed by NASA, and Edward III, who is an officer in the Navy Civil Engineering Corps.

NAVAL SURFACE WARFARE CENTER



TECHNICAL DIRECTOR

DR. IRA M. BLATSTEIN

Dr. Ira M. Blatstein, a native of Hackensack, NJ, received his B.S. degree in Physics in 1967 from Drexel University, Philadelphia, and his M.S. and Ph.D. degrees in Physics from Catholic University, Washington, DC, in 1974.

From 1962 to 1967 Dr. Blatstein participated in the Naval Air Development Center's Student Engineer Development Program, working in the Aeromechanics Department. He then transferred to the Naval Ordnance Laboratory, where he worked until 1976 as a Research Physicist and Group Leader in Explosion Effects in the Underwater Explosions Branch. In 1976 he became Head of the Explosion Damage Branch of what had by that time become the Naval Surface Weapons Center. In 1980 he accepted a 1-year rotational assignment in the Office of the Chief of Naval Operations (OPNAV), in which he served as Assistant for Antisubmarine Warfare and Surveillance to the Director of Navy Test and Evaluation and Technology Requirements.

Returning to NSWC, Dr. Blatstein became Head of the Radiation Division in 1981, and Head of the Engineering Department in 1985. In 1986, while in this latter position, he became a member of the Senior Executive Service (SES). He was named Deputy Technical Director of NSWC in 1987 and Head of the Research and Technology Department in 1988. Upon establishment of the current Naval Surface Warfare Center on 2 January 1992, he became its first Technical Director.

Dr. Blatstein's many achievements have come both as a senior manager and as an internationally renowned scientist and technologist. He has provided broad-based leadership of a diverse range of research and technology programs in support of the Navy's requirements for surface ship combat systems, ordnance, mines, and strategic systems. He has been instrumental in advancing knowledge and technologies in areas such as biotechnology, corrosion research, electrochemistry, nonlinear dynamics, and superconductivity. He is broadly recognized as an expert in the phenomena associated with such explosions and has organized two major oceanic experiments to examine associated ocean basin phenomena. These experiments involved numerous US Navy organizations and contractors as well as several international organizations. Dr. Blatstein has been the prime mover in ensuring that the Navy retains its capability to conduct underwater explosion research and has been the chief architect in devising a Navy facility plan for the future that protects both Navy and environmental interests. He has also been a major contributor in extending the Navy's technology-base capability in shaped-charge warhead technology.

As NSWC Technical Director, Dr. Blatstein is the senior civilian leader of an organization that employs 23,500 people located at 13 major sites and that has an annual budget of more than \$3 billion. His in-depth understanding of Navy personnel and financial systems and operations was a major factor in the successful launching of this major new organization with a sound business foundation. As NSWC Technical Director, he has repeatedly been sought out by senior Navy and Department of Defense leadership to participate in advanced planning directed at transitioning to a post-Cold War environment and associated domestic agenda.

Dr. Blatstein has been awarded the Meritorious Executive Rank Award for his performance as a member of the SES. While at Drexel University he twice received the Founder's Day Award for Rank of First in Basic Science Majors (1963 and 1965). His contributions in furthering opportunities for and recognition of women at all levels of participation in science and engineering were acknowledged by the Women in Science and Engineering (WISE) Award. In addition, he has received numerous outstanding performance and cash awards throughout his career. He has authored many technical publications and has reviewed numerous articles for the Acoustical Society of America, the Navy Journal of Underwater Acoustics, and the Journal of Geophysical Research. He has been invited to deliver papers on acoustic modeling of underwater explosion phenomena at various U.S. and international symposia.

Dr. Blatstein and his wife, the former Sue Liebman, have two children: Amy and David.

NAVAL SURFACE WARFARE CENTER CARDEROCK DIVISION
BETHESDA, MD 20084-5000
(301) 227-2828 DSN 287-2828

MISSION

Provide research, development, test and evaluation, Fleet support, and in-service engineering for surface and undersea vehicle hull, mechanical and electrical systems, and propulsors; provide logistics R&D; and provide support to the Maritime Administration and the maritime industry. Execute other responsibilities as assigned by the Commander, Naval Surface Warfare Center.

PERSONNEL

Commander: CAPT Dennis K. Kruse, USN Ext. 1515
 Director: Mr. Richard E. Metrey Ext. 1628

	Civilian	Military
Total On Board (10/92)	4,529	65
FTP On Board (10/92)	4,389	
FTP Scientists & Engineers (10/92)	2,264	

LEADERSHIP AREAS

Surface warfare modeling and analysis	Surface and undersea vehicle hull, machinery
Surface ship combat and combat control systems	propulsors, and equipment
Surface ship electronic warfare	Platform systems integration
Surface ship electromagnetic and electro-optic	Strategic targeting support (including fire control,
reconnaissance, search, and track systems	targeting, and re-entry systems)
Surface ship weapon systems (including shipboard	Amphibious warfare systems
missile integration)	Special warfare systems
Ship vulnerability and survivability (including	Warheads (explosives and energetic materials)
submarine HM&E)	Mines, mine countermeasures, and mine clearance
Ship active and passive signatures (including	systems
submarine HM&E)	

FUNDING

(\$681.7 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.1	0.5	SPAWAR	0.9
6.2	10.4	NAVAIR	1.1
6.3a	2.4	NAVSEA	52.4
6.3b	16.9	NAVFAC	0.3
6.4	8.5	NAVSUP	0.2
6.5	1.3	OCNR	14.1
6.6	3.0	DOD	3.7
Other RDT&E	4.5	Other Navy	26.5
O&MN	24.3	Other Gov't	0.4
APN	0.0	Private	0.4
OPN	16.5	Total	100
SCN	7.6		
Other Navy	1.3		
All Other	2.8		
Total	100		

PROPERTY

Land		Acquisition Costs		Buildings	
Owned	325 acres	Real Property	\$859 Million	RDT&E	2,687,000 ft ²
		Equipment	\$96 Million	Administrative	297,000 ft ²
				Other	47,000 ft ²

NAVAL SURFACE WARFARE CENTER CARDEROCK DIVISION



COMMANDER

CAPTAIN DENNIS K. KRUSE, USN

Captain Dennis K. Kruse is currently Commander of the Carderock Division of the Naval Surface Warfare Center, which is headquartered in Carderock, MD; has major operating sites in Annapolis, MD, and Philadelphia, PA; and has facilities at 12 other sites throughout the country.

A native of Fort Wayne, IN, Captain Kruse is a 1965 graduate of the Naval Academy. Commissioned in the unrestricted line, he served as Damage Control Assistant, Combat Information Center Officer, and Navigator aboard USS *Courtney* (DE 1021) and as Engineer Officer aboard USS *Talbot* (DEG 4, now FFG 4). Following transfer to the restricted line as Engineering Duty Officer, and after postgraduate education at the Massachusetts Institute of Technology, he served both as Ship Superintendent and Type Desk Officer at Philadelphia Naval Shipyard and later as a member of the Commander in Chief, U.S. Atlantic Fleet, Propulsion Examining Board. His extensive service in the Naval Sea Systems Command has included assignments as Engineering Duty Accession Programs Officer, Executive Assistant to the Deputy Commander for Ship Systems, Director of Damage Control and Personnel Protection, Director of the Boiler Overhaul Improvement Program, Director of the Boiler Engineering Division, and Director of Propulsion Systems.

Captain Kruse was Commanding Officer of the Naval Sea Support Center, Atlantic, in Portsmouth, VA, from 1986 to 1988. He then commanded the Naval Ship Systems Engineering Station (NAVSESSES) in Philadelphia from 1988 through 1991. He assumed command of the David Taylor Research Center (DTRC) in September 1991. Upon activation of the new Naval Surface Warfare Center in January 1992, Captain Kruse became Commander of the Carderock Division, which was formed by the merger of NAVSESSES and DTRC.

Captain Kruse completed the Executive Development Program at Cornell University and holds an M.S. degree in Mechanical Engineering and the graduate professional degree of Ocean Engineer from the Massachusetts Institute of Technology. His awards include the Legion of Merit, the Meritorious Service Medal (three awards), and the Navy Commendation Medal.

Captain Kruse and his wife, the former Jacquelyn I. Pierce, have two children: Keith, a Navy lieutenant, and Caryn.

NAVAL SURFACE WARFARE CENTER CARDEROCK DIVISION



DIRECTOR

RICHARD E. METREY

Mr. Richard E. Metrey was born in Milwaukee, WI. He received his bachelor's degree in Mechanical Engineering from Marquette University, Milwaukee, and his M.S. degree, also in Mechanical Engineering, from George Washington University, Washington, DC. Postgraduate studies included advanced mathematics at George Washington University, thermodynamics and heat transfer at the Massachusetts Institute of Technology, vibration and shock analysis at Princeton University, and law at Georgetown University.

Mr. Metrey entered government service in 1960 as a project engineer in the Ships Machinery Division of the former Bureau of Ships. He subsequently served as the Physical Science Administrator (Navy Exploratory Development) in the Naval Material Command, as Head of the Program and Appraisal Branch in the Naval Air Systems Command, and as Technological Forecaster and later Advanced Development Administrator for the Naval Ordnance Systems Command. In 1974 he became Program Manager for the Navy Advanced Prototyping Program, Naval Sea Systems Command, initiating such programs as Vertical Launch, Seafire, Multimode Guidance, Advanced Surface-to-Air Missile, and the Agile Beam Illuminator.

From 1977 to 1986 he served in the Office of the Assistant Secretary of the Navy (Research, Engineering, and Systems), first as Special Assistant for Combat Systems, then as Director of Surface Warfare Programs, and finally as Deputy Assistant Secretary of the Navy for Surface Warfare. In this last position, he was responsible for Navy surface ship programs, including launchers, fire-control systems, weapons, and sensors. He was the principal advisor to the Assistant Secretary of the Navy on matters pertaining to the Navy surface-warfare R&D and acquisition programs, and acted as the principal point of contact in the Navy for the Program of Naval Cooperation with the People's Republic of China.

Mr. Metrey became Technical Director of the David Taylor Naval Ship R&D Center (later the David Taylor Research Center) in June 1986. In January 1992 he became Director, Naval Surface Warfare Center, Carderock Division.

Mr. Metrey's awards include the Presidential Rank Meritorious Executive Award, the George Washington University Engineering Alumni Achievement Award, and a citation by the Chief of Naval Material for management and completion of advanced prototyping development of the Vertical Launcher. He is also a member of Sigma Xi. Mr. Metrey serves as the U.S. representative on the European Cooperation in Maritime Research Panel and is a member of the Marine Facilities Panel of the U.S./Japan Natural Resources organization.

He and his wife, the former Mary Sue Sonefeld, are the parents of four sons.

NAVAL SURFACE WARFARE CENTER DAHLGREN DIVISION
DAHLGREN, VA 22448-5000
(703) 663-8531 DSN 249-8531

MISSION

Provide research, development, test and evaluation, engineering, and Fleet support for surface warfare systems, surface ship combat systems, ordnance, mines, amphibious warfare systems, mine countermeasures, special warfare systems, and strategic systems. Execute other responsibilities as assigned by the Commander, Naval Surface Warfare Center.

PERSONNEL

Commander: CAPT Norman S. Scott, USN Ext. 8101
 Executive Director: Dr. Thomas A. Clare Ext. 8103

	Civilian	Military
Total On Board (10/92)	6,138	232
FTP On Board (10/92)	6,040	
FTP Scientists & Engineers (10/92)	3,275	

LEADERSHIP AREAS

Surface warfare modeling and analysis
 Surface ship combat and combat control systems
 Surface ship electronic warfare
 Surface ship electromagnetic and electro-optic reconnaissance, search, and track systems
 Surface ship weapon systems (including shipboard missile integration)
 Ship vulnerability and survivability (including submarine HM&E)
 Ship active and passive signatures (including submarine HM&E)

Surface and undersea vehicle hull, machinery propulsors, and equipment
 Platform systems integration
 Strategic targeting support (including fire control, targeting, and re-entry systems)
 Amphibious warfare systems
 Special warfare systems
 Warheads (explosives and energetic materials)
 Mines, mine countermeasures, and mine clearance systems

FUNDING

(\$962.3 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	1.9	SPAWAR	2.5
6.2	7.3	NAVAIR	8.4
6.3a	0.9	NAVSEA	47.5
6.3b	19.4	NAVFAC	0.3
6.4	7.2	OCNR	8.9
6.5	2.0	SSPO	5.4
6.6	5.4	DOD	6.7
Other RDT&E	8.9	Marine Corps	5.4
O&MN	16.0	NELO	8.4
APN	0.4	NAV SPEC Warfare Command	0.8
OPN	5.2	NEODTC	0.3
WPN	2.1	All Other	5.4
SCN	16.6	Total	100
Other Navy	3.2		
All Other	3.5		
Total	100		

PROPERTY

Land		Acquisition Costs		Buildings	
Owned	5,703 acres	Real Property	\$1,071 Million	RDT&E	2,113,000 ft ²
		Equipment	\$106 Million	Administrative	365,000 ft ²
				Other	243,000 ft ²

NAVAL SURFACE WARFARE CENTER DAHLGREN DIVISION



COMMANDER

CAPTAIN NORMAN S. SCOTT, USN

Captain Norman Stuart Scott is a native of Oregon. He attended Pacific University, Forest Grove, OR, graduating with a B.S. degree in Biology in 1963. He was commissioned through the Officer Candidate School in 1965.

Captain Scott first served as Auxiliaries Division Officer and First Division Officer/Combat Cargo Officer on USS *Alamo* (LSD 33). In March 1967 he was assigned to Coastal Division 11, Republic of Vietnam Navy, as Officer in Charge of Swift Boat and Division Operations Officer. He attended the Naval Destroyer School, Newport, RI, graduating in February 1969.

Captain Scott's next assignment was a tour as Chief Engineer of USS *Eversole* (DD 789) from March 1969 to December 1970. He was accepted to the Naval Postgraduate School, where he graduated in 1973 with a master's degree in Management Science. Captain Scott was then assigned to Supervisor of Shipbuilding and Repair, Newport News, VA, as Assistant Project Manager for the new *Virginia*-class nuclear-powered cruisers. He concurrently served as Ship Superintendent for the construction of the lead ship, USS *Virginia* (CGN 38), and its follow-on, USS *Texas* (CGN 39).

After completing a course of instruction at the Naval Command and Staff College, Newport, RI, Captain Scott was assigned as Executive Officer aboard USS *Richard L. Page* (FFG 5), which received the Meritorious Unit Commendation and the Battenburg Cup for excellence. From 1979 to 1981, Captain Scott served as the Operational Test Coordinator for OPEVAL of the FFG 7-class frigate with Commander Operational Test and Evaluation Force, Norfolk, VA. He was promoted to the rank of Commander in 1979. Captain Scott's next tour of duty was as Commanding Officer of USS *Gallery* (FGG 26) where he served until 1984, during which time *Gallery* earned the Meritorious Unit Commendation. Captain Scott was next assigned as Senior Gas Turbine Examiner on the Atlantic Fleet Propulsion Examining Board. He served concurrently as a Senior Examiner for Steam and Diesel Propulsion. He was promoted to his present rank in 1985 and received the Material Professional designation in 1986. From 1986 to 1988, Captain Scott was assigned to the Aegis Shipbuilding Program, initially serving as Division Director of the Operations/Finance Division and then moving to the position of Deputy Program Manager. He commanded the cruiser USS *Gridley* (CG 21) from 1989 to 1991, during which time *Gridley* underwent a complex New Threat Upgrade overhaul.

Captain Scott's awards include the Legion of Merit, the Meritorious Service Medal (gold star in lieu of third award), the Navy Commendation Medal (gold star in lieu of third award), and the Navy Achievement Medal. In addition, he wears various campaign and service medals.

Captain Scott is married to the former Cheryl Lynn Gillis. They have two children, Kevin and Carrie.

NAVAL SURFACE WARFARE CENTER DAHLGREN DIVISION



EXECUTIVE DIRECTOR

DR. THOMAS A. CLARE

Dr. Thomas A. Clare has been Executive Director of the Naval Surface Warfare Center's Dahlgren Division since the inception of the new Center in January 1992. He had been Technical Director of the former Naval Surface Warfare Center since 1989.

Dr. Clare, a native of New York, began his career as an Aeroballistics Engineer at the Naval Weapons Laboratory, Dahlgren, in 1967. He holds bachelor's and master's degrees in Aerospace Engineering from the University of Notre Dame and completed his doctorate there in 1970.

When he began at Dahlgren, Dr. Clare worked at the project level, rising to the status of principal investigator, and in 1973 was selected to head the Center's Aeromechanics Branch. Two years later he was named Head of the Exterior Ballistics Division. From 1975 to 1976 he served as Science Advisor to the Commander, Naval Surface Force Atlantic, Norfolk, VA. Upon returning to the Center, Dr. Clare headed the Aegis Ship Combat Systems Division until he was named Deputy Head of the Center's Electronic Systems Department in 1979. Subsequently, he headed the Combat Systems and Strategic Systems Departments before moving to the Engineering and Information Systems Department.

Dr. Clare's exceptional expertise as a discerning and innovative manager of large-scale technical programs and organizations is respected throughout Navy, the Department of Defense, and the defense industrial base. While he was Head of the Aegis Ship Combat Systems Division, he successfully managed a large and complex systems engineering program that provided the foundation for a major reorientation of Division roles and work assignments. He is directly responsible for the Navy's undertaking of a new investigation of the technology of systems engineering. Dr. Clare is a strong proponent of the Navy's Science and Technology Base Program and has enhanced the Division's capabilities in this area. He has written extensively on R&D management and is frequently requested to serve on high-level management panels at the service level. He was a member of the Naval Research Advisory Committee's Panel on Laboratory/Industry Relations, and in a special assignment to the Space and Naval Warfare Systems Command developed a Navy Systems Architecture for command, control, communications, and intelligence (C³I).

Dr. Clare has received numerous awards and commendations during his career, including the Department of the Navy Superior Civilian Service Award in 1986 and the Presidential Rank of Meritorious Executive in 1990. He has published more than 30 papers in refereed journals and in the proceedings of national symposia.

Dr. Clare and his wife, Rose Mary, have two sons: Tom and Todd.

NAVAL SURFACE WARFARE CENTER CRANE DIVISION
300 HIGHWAY 361
CRANE, IN 47522-5000
(812) 854-2511 DSN 482-2511

MISSION

Provide engineering and industrial base support of weapon systems, subsystems, equipments, and components with principal emphasis on industrial and product engineering associated with surface warfare systems in the areas of electronics, ordnance, pyrotechnics, gun systems, microwave technology, small arms, and surface ship electronic warfare in-service engineering. Execute other responsibilities as assigned by the Commander, Naval Surface Warfare Center.

PERSONNEL

Commander: CAPT Stephen T. Howard, USN Ext. 1210
 Executive Director: Mr. David M. Reece Ext. 3666

	Civilian	Military
Total On Board (10/92)	6,482	36
FTP On Board (10/92)	6,343	
FTP Scientists & Engineers (10/92)	1,251	

LEADERSHIP AREAS

Surface warfare modeling and analysis	Surface and undersea vehicle hull, machinery propulsors, and equipment
Surface ship combat and combat control systems	Platform systems integration
Surface ship electronic warfare	Strategic targeting support (including fire control, targeting, and re-entry systems)
Surface ship electromagnetic and electro-optic reconnaissance, search, and track systems	Amphibious warfare systems
Surface ship weapon systems (including shipboard missile integration)	Special warfare systems
Ship vulnerability and survivability (including submarine HM&E)	Warheads (explosives and energetic materials)
Ship active and passive signatures (including submarine HM&E)	Mines, mine countermeasures, and mine clearance systems

FUNDING

(\$756.1 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	0.0	SPAWAR	0.9
6.2	0.1	NAVAIR	7.0
6.3a	0.0	NAVSEA	53.0
6.3b	1.2	NAVFAC	0.1
6.4	1.7	NAVSUP	4.4
6.5	0.0	OCNR	0.1
6.6	1.8	SSPO	4.7
Other RDT&E	1.7	Other DOD	9.5
O&MN	22.3	Other Navy	3.5
APN	2.5	Other Gov't	0.4
OPN	12.2	Private	0.2
WPN	10.5	Direct Cite	16.2
SCN	5.5		
Other Navy	6.1		
All Other	31.2		
FMS	3.2		
Total	100	Total	100

PROPERTY

Land	Acquisition Costs	Buildings
Owned 62,965 acres	Real Property \$1,384 Million	RDT&E 2,906,000 ft ²
	Equipment \$202 Million	Administrative 2,027,000 ft ²

NAVAL SURFACE WARFARE CENTER CRANE DIVISION



EXECUTIVE DIRECTOR

DAVID M. REECE

Mr. David M. Reece was born and grew up in the Panama Canal Zone. He came to the U.S. in 1958 to attend college at Rose-Hulman Institute of Technology in Terre Haute, IN. After graduating with a B.S. degree in Electrical Engineering, Mr. Reece joined the General Electric Company (GE) in Schenectady, NY, where he worked until he went on active duty as a platoon leader with the Army Combat Corps of Engineers in Germany. After active duty, Mr. Reece returned to GE and worked in GE field service in Indiana, Kentucky, Ohio, and Illinois until he joined Crane as an Electronic Engineer in support of the Poseidon System in 1966.

During his engineering career with the Navy at Crane, Mr. Reece has become known nationally for his contributions in electronic packaging and standardization. He has written numerous articles that have been published in technical journals and has received several awards in recognition of his technical contributions. He is one of the founders of the Navy's extremely successful Standard Electronic Module Program, which has saved millions of dollars for the Navy while contributing to significantly increased readiness and reliability of user systems. He has also been recognized by Governor Robert Orr for his work with the Indiana Corporation for Science and Technology.

Mr. Reece has held progressively more responsible engineering management positions while at Crane, and was the founder and Director of the Center's Electronic Development Department. He was assigned as Center Technical Director in 1985. In January 1992 he became the first Executive Director of the Crane Division of the Naval Surface Warfare Center.

Mr. Reece has received numerous awards in recognition of his management contributions, including many outstanding performance ratings and the U.S. Navy Superior Civilian Service Award. He received a master's degree in Public Administration from Indiana University, and completed several other advanced management and executive programs. Mr. Reece has been recognized with an honorary Doctor of Engineering degree from Rose-Hulman Institute of Technology for his engineering and engineering management contributions. He is a member of the Senior Executive Service.

Mr. Reece is active in many professional organizations, supports several community activities, and serves on the Board of Visitors for Indiana University School of Public and Environmental Affairs and Indiana University-Purdue University School of Engineering, as well as on the Board of Directors of the Navy's Electronics Manufacturing Productivity Facility (EMPF).

He and his wife, the former Nancy Elliott, have two sons, Gregory and Andrew.

NAVAL SURFACE WARFARE CENTER INDIAN HEAD DIVISION
101 STRAUSS AVENUE
INDIAN HEAD, MD 20640-5035
(301) 743-4000 DSN 354-4000

MISSION

Provide primary technical capability in energetics for all Warfare Centers through engineering, Fleet and operational support, manufacturing technology, limited production, industrial base support, and secondary technical capability through research, development, test and evaluation for energetic materials, ordnance devices and components, and related ordnance engineering standards to include chemicals, propellants and their propulsion systems, explosives, pyrotechnics, warheads, and simulators. Provide support including special weapons support, explosive safety, and ordnance environmental support to all Warfare Centers, military departments, and the ordnance industry. Execute other responsibilities as assigned by Commander, Naval Surface Warfare Center.

PERSONNEL

Commander: CAPT David G. Maxwell, USN Ext. 4401
 Director: Mr. Roger M. Smith Ext. 4276

	Civilian	Military
Total On Board (10/92)	2,483	40
FTP On Board (10/92)	2,407	
FTP Scientists & Engineers (10/92)	662	

LEADERSHIP AREAS

Surface warfare modeling and analysis	Surface and undersea vehicle hull, machinery propulsors, and equipment
Surface ship combat and combat control systems	Platform systems integration
Surface ship electronic warfare	Strategic targeting support (including fire control, targeting, and re-entry systems)
Surface ship electromagnetic and electro-optic reconnaissance, search, and track systems	Amphibious warfare systems
Surface ship weapon systems (including shipboard missile integration)	Special warfare systems
Ship vulnerability and survivability (including submarine HM&E)	Warheads (explosives and energetic materials)
Ship active and passive signatures (including submarine HM&E)	Mines, mine countermeasures, and mine clearance systems

FUNDING

(\$282.4 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.1	0.0	SPAWAR	0.1
6.2	0.4	NAVAIR	19.6
6.3a	1.4	NAVSEA	20.1
6.3b	1.5	NAVFAC	1.8
6.4	0.1	NAVSUP	0.2
6.5	0.1	OCNR	0.0
6.6	0.1	SSPO	0.5
Other RDT&E	2.7	DOD	0.0
O&MN	19.5	Army	18.9
APN	1.1	Air Force	5.9
OPN	10.8	Other Navy	14.8
WPN	9.8	Other	1.7
SCN	2.1	Direct Cite	16.4
Other Navy	4.1	Total	100
All Other	0.0		
AFMSE	5.9		
Army	18.3		
Air Force	5.7		
Direct Cite	16.4		
Total	100		

PROPERTY

Land		Acquisition Costs		Buildings	
Owned	3,405 acres	Real Property	\$929 Million	RDT&E	1,330,000 ft ²
		Equipment	\$85 Million	Administrative	155,000 ft ²
				Other	651,000 ft ²

NAVAL SURFACE WARFARE CENTER INDIAN HEAD DIVISION



COMMANDER

CAPTAIN DAVID G. MAXWELL, USN

Captain David G. Maxwell assumed command of the Naval Surface Warfare Center, Indian Head Division, in June 1992.

Captain Maxwell is a native of Coronado, CA. He graduated from the Naval Academy in 1968 and holds a master's degree in Operations Research from the Naval Postgraduate School. He is a 1979 graduate of the Naval War College.

During his sea tours, Captain Maxwell served as Communications and Operations Officer aboard USS *Bradley* (DE 1041, now FF 1041) and as Operations Officer aboard USS *Robison* (DDG 12) operating out of San Diego. During these sea tours he deployed to the Western Pacific and participated in naval operations off the coast of Vietnam.

From 1975 to 1978, Captain Maxwell was assigned to the Officer Program Analysis Branch of the Bureau of Naval Personnel. In 1979 he reported to the Cruiser Destroyer Group Eight staff and served as Scheduling and Naval Tactical Data Systems Officer while deployed to the Mediterranean and Caribbean. He was assigned as Executive Officer aboard USS *Dahlgren* (DDG 43) operating out of Norfolk in 1981 and deployed to the Mediterranean and South America.

In 1983 Captain Maxwell was assigned to the Fleet Combat Direction Systems Support Activity, Dam Neck, VA, as Project Manager for Naval Tactical Data System computer program development and life-cycle maintenance of CGN 38-, DDG 993-, CG 26-, and CGN 9-class ships. From 1986 until 1988 he was Commanding Officer aboard USS *William V. Pratt* (DDG 44), deployed to the Mediterranean and Caribbean. Before assuming command of the NSWC Indian Head, Captain Maxwell was Commanding Officer of the Naval Ordnance Missile Test Station, White Sands Range, NM.

Captain Maxwell has twice been awarded the Meritorious Service Medal and the Naval Commendation Medal. He and his wife, the former Renee Marise Brown, have two children: Heather and Michael.

NAVAL SURFACE WARFARE CENTER INDIAN HEAD DIVISION



EXECUTIVE DIRECTOR

ROGER M. SMITH

Mr. Roger M. Smith, a native of Ann Arbor, MI, received his bachelor's degree in Physics from Dickinson College, Carlisle, PA, in 1961; continued his studies in Probability and Statistics and Physics at the University of Maryland, College Park, MD; and was awarded a master's degree in Physics (Acoustics) by American University, Washington, DC, in 1968.

After serving briefly as a Research Assistant at Operations Research, Inc., Silver Spring, MD, he began his Federal career in late 1961 with the Bureau of Ships (BuShips), working in the management of mine countermeasures research. Beginning in 1968 he served 4 years as scientific advisor for mine countermeasures research at the Naval Sea Systems Command (NAVSEA), the successor organization to BuShips. In 1972 Mr. Smith transferred to the Naval Material Command where he served as Deputy Project Manager of the Mine Warfare Project (PM-19). Returning to NAVSEA in 1975 he assumed the duties of Deputy and Technical Director, Mine Warfare EOD and Special Warfare (SEA 663).

From 1979 to 1982 Mr. Smith served as Deputy and Technical Director, Surface Ship Antisubmarine Warfare (ASW) Systems (SEA 06Y), following which he was named Technical Director and Deputy, ASW and Undersea Warfare (SEA 06U). He served as Technical Director of the Naval Undersea Warfare Engineering Station (NUWES), Keyport, WA, from 1987 until 1989. In October 1989 he was named Technical Director of the Naval Ordnance Station (NOS), Indian Head, MD. With standup of the warfare centers on 2 January 1992, Mr. Smith was appointed Executive Director of the Indian Head Division, Naval Surface Warfare Center.

Mr. Smith has been a major contributor to the advancement of the Navy's warfighting capabilities. He is noted for his ability to effectively manage large and complex systems acquisition programs. His technical contributions to ASW and mine warfare are also widely recognized throughout the Navy, and his strong personal expertise in mine warfare led to his serving as U.S. representative to NATO for Mine Warfare and as a technical advisor to U.S. forces for mine clearance operations in North Vietnam. His management style is characterized by a strong focus on customer needs and an aggressive pursuit of optimum productivity in the organizations he has headed.

Mr. Smith received the Navy Superior Civilian Service Award in 1989 and again in 1991. He holds numerous commendations, and his many noteworthy achievements have been recognized consistently throughout his career with performance awards.

He and his wife, the former Mary Helen Kepner, have a daughter, Merrill.

NAVAL SURFACE WARFARE CENTER PORT HUENEME DIVISION
4363 MISSILE WAY
PORT HUENEME, CA 93043-4307
(805) 985-7284

MISSION

Provide test and evaluation, in-service engineering, and integrated logistic support for surface and mine warfare combat systems, system interface, weapon systems and subsystems, unique equipments, and related expendable ordnance of the Navy Surface Fleet. Execute other responsibilities as assigned by the Commander, Naval Surface Warfare Center.

PERSONNEL

Commander: CAPT John S. Beachy, USN Ext. 8238
Executive Director: Mr. Roger T. Rains Ext. 8242

	Civilian	Military
Total On Board (10/92)	2,983	269
FTP On Board (10/92)	2,935	
FTP Scientists & Engineers (10/92)	1,024	

LEADERSHIP AREAS

Surface warfare modeling and analysis	Surface and undersea vehicle hull, machinery
Surface ship combat and combat control systems	propulsors, and equipment
Surface ship electronic warfare	Platform systems integration
Surface ship electromagnetic and electro-optic	Strategic targeting support (including fire control,
reconnaissance, search, and track systems	targeting, and re-entry systems)
Surface ship weapon systems (including shipboard	Amphibious warfare systems
missile integration)	Special warfare systems
Ship vulnerability and survivability (including	Warheads (explosives and energetic materials)
submarine HM&E)	Mines, mine countermeasures, and mine clearance
Ship active and passive signatures (including	systems
submarine HM&E)	

FUNDING

(\$367.4 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.1	0.0	DRPM Aegis	12.1
6.2	0.0	PEO SD	11.1
6.3a	0.0	PEOCU	7.6
6.3b	6.2	NAVSEA	69.2
6.4	1.7	Total	100
6.5	0.3		
6.6	0.0		
O&MN	39.0		
APN	0.0		
OPN	20.1		
WPN	4.3		
SCN	20.0		
Other Navy	2.2		
All Other	6.2		
Total	100		

PROPERTY

Land		Acquisition Costs	
Owned	0 acres	Real Property	\$6 Million
		Equipment	\$25 Million

NAVAL SURFACE WARFARE CENTER PORT HUENEME DIVISION



COMMANDER

CAPTAIN JOHN SCOTT BEACHY, USN

Captain John Scott Beachy, a native of San Antonio, TX, graduated from the Naval Academy in 1966. His first assignment was as Missile Officer and later Fire Control Officer aboard USS *Berkeley* (DDG 15). From 1968 to 1969 he served in river patrol boat units in the Republic of Vietnam, first as Senior Patrol Officer of River Division 593 and later as Operations Officer of River Division 515.

After attending Naval Destroyer School, Captain Beachy served as Weapons Officer aboard USS *Mitscher* (DDG 35) until 1971 and Weapons Officer aboard USS *Conyngham* (DDG 17) until 1972, when he assumed command of USS *Ready* (PG 87), which was assigned as a forward deployed unit of the Sixth Fleet, homeported in Naples, Italy.

Captain Beachy graduated from the Naval Postgraduate School in 1977 with a master's degree in Physics and was then selected as U.S. representative in the foreign officers' class at the Naval Command and Staff Course at Newport, RI. Following graduation in 1978, Captain Beachy was assigned as Executive Officer aboard USS *William V. Pratt* (DDG 44). In 1980 he was assigned to Naval Sea Systems Command (NAVSEA), where he worked in high-energy laser weapon research and development. He graduated from the Industrial College of the Armed Forces in 1983, with distinction.

In 1984 Captain Beachy assumed command of USS *Claude V. Ricketts* (DDG 5) while the ship was assigned to naval gunfire support duty off the coast of Beirut, Lebanon. In 1986 he attended the Integrated Warfare Course at the Naval War College, following which he attended the Defense Systems Management College. For the next 7 months he served on the immediate staff of Deputy Commander, Weapons and Combat Systems Directorate, NAVSEA. In 1987 he assumed leadership of the NATO Seasparrow Surface Missile System Project and served 4 1/2 years as Project Manager. Captain Beachy assumed command of the Port Hueneme Division of the Naval Surface Warfare Center in June 1992.

Captain Beachy's awards include the Navy Commendation Medal with Combat V and star in lieu of second award, and the Legion of Merit. He is an Eagle Scout.

Captain Beachy and his wife, the former Patricia Slaughter, have three children: Karen, Brian, and Sarah.

NAVAL SURFACE WARFARE CENTER PORT HUENEME DIVISION



EXECUTIVE DIRECTOR

ROGER T. RAINS

Mr. Roger T. Rains was born in Blythe, CA. He graduated from California State Polytechnic University, San Luis Obispo, CA, in 1959 with a bachelor's degree in Agriculture Engineering. In 1974 he received his diploma from the Industrial College of the Armed Forces, Washington, DC, and his master's degree in Management of Natural Resources from George Washington University, Washington, DC.

From 1963 until 1969 Mr. Rains was a Project Engineer at Pacific Missile Test Range, Point Mugu, CA. After serving for a year as Head of the Conventional Weapons Branch in Point Mugu's Fleet Weapons Department, he became Program Manager of the Fleet Weapons Department, and later Head of the Engineer Serviceability Division. In 1975 he became Manager of the Support Engineering Department.

From 1977 to 1980 Mr. Rains served as Director, Test and Evaluation at the Naval Ship Weapon System Engineering Station (NSWSES), Port Hueneme, CA. After serving for a year as Associate Director of Engineering, he became Technical Director of NSWSES. He spent the following year as Deputy Director of the Combat Systems Field Operations and Ordnance Support Group at Naval Sea Systems Command. Mr. Rains returned to NSWSES as Technical Director. In January 1992 Mr. Rains became Technical Director of the Port Hueneme Division of the Naval Surface Warfare Center. In June 1992 his title changed to Executive Director.

Mr. Rains has been recognized with the Meritorious Civilian Service Award, the Superior Civilian Service Award, SES Performance Awards, Special Acts Awards, and the Presidential Meritorious Executive Rank Award. He is Chairman of the Professional Council of Federal Scientists and Engineers (two terms), a Member of the President's Advisory Council to the College of Engineering, California State Polytechnic University, San Luis Obispo, CA, and a Navy Member of the OPM Task Force for SES Recertification.

He and his wife, the former Delores Velia Rodriguez, have three children: Andrea, Pamela, and Angela.

**NAVAL UNDERSEA WARFARE CENTER
NEWPORT, RI 02841-5047
(401) 841-3344 DSN 948-3344**

MISSION

Operate the Navy's full-spectrum research, development, test and evaluation, engineering and fleet support center for submarines, autonomous underwater systems, and offensive and defensive weapons systems associated with undersea warfare.

PERSONNEL

Commander: RADM Scott L. Sears, USN Ext. 6761
Technical Director: Mr. Earle L. Messere Ext. 2550

	Civilian	Military
Total On Board (10/92)	7,740	404
FTP On Board (10/92)	7,549	
FTP Scientists & Engineers (10/92)	3,316	

LEADERSHIP AREAS

Undersea warfare modeling and analysis	Submarine electromagnetic, electro-optic, and nonacoustic effects reconnaissance, search, and track systems
Submarine combat and combat control systems	
Surface ship and submarine sonar systems	
Submarine electronic warfare	Undersea vehicle active and passive signatures
Submarine-launched weapons systems	Submarine vulnerability and survivability
Undersea ranges	Torpedoes and torpedo countermeasures
Submarine unique on-board communications systems and communications nodes	

FUNDING

(\$1,262.4 Million, FY 1992)			
By Category	Percent	By Sponsor	Percent
6.1	0.3	SPAWAR	2.4
6.2	4.1	NAVAIR	7.5
6.3a	1.2	NAVSEA	68.0
6.3b	9.3	NAVSUP	0.1
6.4	9.9	OCNR	4.8
6.5	3.5	SSPO	0.1
6.6	1.5	DOD	1.4
Other RDT&E	0.4	PEO SCWS	2.7
O&MN	19.0	PEO SSAS	2.4
APN	0.1	DRPM	1.4
OPN	20.0	Other Navy	9.2
WPN	16.3	Total	100
SCN	8.0		
FMS	1.0		
Other Navy	1.6		
All Other	3.8		
Total	100		

PROPERTY

Land		Acquisition Costs		Buildings	
Owned	3,186 acres	Real Property	\$683 Million	RDT&E	2,744,216 ft ²
		Equipment	\$435 Million	Administrative	339,608 ft ²
				Other	2,418,733 ft ²

NAVAL UNDERSEA WARFARE CENTER



COMMANDER

REAR ADMIRAL SCOTT L. SEARS, USN

Rear Admiral Scott L. Sears was born in Cleburne, TX. He received his B.S. degree in Physics and Economics from the Naval Academy in 1966. He earned his M.S. degree in Electrical Engineering in 1970 and his E.E. degree in 1971, both from the Massachusetts Institute of Technology.

From 1967 to 1980, Rear Admiral Sears served aboard a series of submarines: USS *Barbel* (SS 580) in 1967 and 1968, USS *Gudgeon* (SS 567) in 1968 and 1969, USS *Spadefish* (SSN 668) from 1972 to 1974, USS *Flying Fish* (SSN 673) from 1974 to 1977, and USS *Henry L. Stimson* (SSBN 655) (blue crew) from 1977 to 1980. In 1980 he joined the Office of the Chief of Naval Operations (CNO) as Head, Strategic Planning Branch, Strategic Submarine Division. From 1983 to 1986 he served as Commanding Officer aboard USS *Albuquerque* (SSN 706).

In 1987 Rear Admiral Sears became Deputy Commander, Training and Operations, for Submarine Squadron 17. In 1988 he returned to CNO as Head, Tactical Weapons Branch, Attack Submarine Division. In 1989 he joined the Naval Sea Systems Command as Program Manager in the AN/BSY-2 Program Office, and in August 1992 he became Commander of the Naval Undersea Warfare Center.

Rear Admiral Sears' awards include the Legion of Merit (two awards), three Meritorious Service Medals, two Navy Commendation Medals, and two Navy Achievement Medals.

Rear Admiral Sears is married to the former Barbara Rost. They have two children, Paul and Kathy.

NAVAL UNDERSEA WARFARE CENTER



TECHNICAL DIRECTOR

EARLE L. MESSERE

Mr. Earle L. Messere was born in Woonsocket, RI. He received his B.S. degree in Engineering Mathematics from the University of Rhode Island in 1956 and his M.S. degree in Aeronautics and Astronautics from the Massachusetts Institute of Technology in 1964. He continued graduate studies in control systems and electrical engineering at Rensselaer Polytechnic Institute and the University of Connecticut and holds a master's degree in Public Administration from the University of Northern Colorado.

From 1956 until 1961 Mr. Messere served in the Army; was employed as an analytical engineer with United Aircraft Corp., East Hartford, CT; and was a senior systems engineer with General Dynamics Corp., Groton, CT.

In 1961 he became an engineer in the Propulsion Division of the Naval Underwater Ordnance Station (NUOS), Newport, RI, a forerunner of NUSC's Newport Laboratory. His subsequent positions included Head, Controls and Guidance Section, and Head, Exploratory Research and Development Branch, both NUOS, and after a name change, Naval Underwater Weapons Research and Engineering Station. Following the establishment of NUSC in 1970, Mr. Messere became Head of the Combat Systems Department. He was named NUSC's Deputy Technical Director in 1980 and Technical Director in 1982. In 1992 he became Technical Director, Naval Undersea Warfare Center.

Among Mr. Messere's recent awards are the Meritorious Executive Presidential Rank Award (1985), the Roger W. Jones Award for Executive Leadership (College of Public and International Affairs of American University, 1986), the Navy Meritorious Civilian Service Award (1987), the State of Rhode Island Governor's Award for Science and Technology (1987), the Navy Superior Civilian Service Award (1989), and the Distinguished Executive Presidential Rank Award (1989).

He serves as a trustee on the University of Rhode Island Foundation and is a member of the University's Marine Program Advisory Council and its College of Engineering Advisory Council. He is also a member of the Advisory and Strategic Planning Committee for the Rhode Island Partnership for Science and Technology and a member of the Rhode Island Strategic Development Commission. He served as Chairman of the Special Naval Material Command Research and Development Centers Mission Review Panel and as a Department of the Navy Representative to the Federal Advisory Commission on Consolidation and Conversion of Defense Research and Development Laboratories.

Mr. Messere and his wife, the former Barbara Eldridge, have three children: Carolyn, Stephen, and Suzanne.

NAVAL UNDERSEA WARFARE CENTER DIVISION NEWPORT
1176 HOWELL STREET
NEWPORT, RI 02841-1708
(401) 841-3124 DSN 948-4572

MISSION

Support the mission of the Naval Undersea Warfare Center by providing research, development, test and evaluation, engineering, and Fleet support for submarines, autonomous underwater systems, undersea offensive and defensive weapon systems and countermeasures associated with undersea warfare. Execute other responsibilities as assigned by the Commander, Naval Undersea Warfare Center.

PERSONNEL

Commander: CAPT Robert L. Mushen, USN Ext. 3344
 Executive Director: Dr. John E. Sirmalis Ext. 4572

	Civilian	Military
Total On Board (10/92)	4,335	113
FTP On Board (10/92)	4,231	
FTP Scientists & Engineers (10/92)	2,462	

LEADERSHIP AREAS

Undersea warfare modeling and analysis	Undersea ranges
Submarine combat and combat control systems	Submarine electromagnetic, electro-optic, and nonacoustic effects reconnaissance, search, and track systems
Surface ship and submarine sonar systems	Undersea vehicle active and passive signatures (except HM&E)
Submarine electronic warfare	Submarine vulnerability and survivability (except HM&E)
Submarine unique on-board communication systems and communication nodes	Torpedoes and torpedo countermeasures
Submarine-launched weapons systems (except strategic ballistic missile systems, cruise missiles and related systems)	

FUNDING

(\$918.5 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	0.5	SPAWAR	3.3
6.2	5.6	NAVAIR	10.3
6.3a	1.6	NAVSEA	71.4
6.3b	12.8	NAVFAC	0.0
6.4	11.5	NAVSUP	0.1
6.5	4.7	OCNR	6.6
6.6	2.0	SSPO	0.1
Other RDT&E	0.6	DOD	1.9
O&MN	16.6	DRPM	1.3
APN	0.1	Other Navy	5.0
OPN	22.7	Total	100
WPN	8.1		
SCN	10.0		
FMS	1.4		
Other Navy	0.2		
All Other	1.6		
Total	100		

PROPERTY

Land	Acquisition Costs	Buildings
Owned 941 acres	Real Property \$511 Million Equipment \$181 Million	RDT&E 1,806,139 ft ² Administrative 266,608 ft ² Other 828,785 ft ²

NAVAL UNDERSEA WARFARE CENTER DIVISION NEWPORT



COMMANDER

CAPTAIN ROBERT L. MUSHEN, USN

Captain Robert L. Mushen was born in Carmel, CA. He received his B.S. degree in Mechanical Engineering from the Naval Academy in 1967 and his M.S. degree in Engineering Mechanics from the Georgia Institute of Technology in 1968.

Captain Mushen served as Division Officer aboard USS *Nathanael Greene* (SSBN 636) from 1969 to 1972. He was Engineering Officer aboard USS *Narwhal* (SSN 671) from 1972 to 1975. After serving for 1 year as Material Officer, Submarine Squadron 3, San Diego, he became Executive Officer (blue crew) aboard USS *George C. Marshall* (SSBN 654) in 1978.

From 1982 to 1984 Captain Mushen was a submarine instructor with the Chief of Naval Operations Senior Officer Ship Material Readiness Course in Idaho Falls, ID. In 1984 he became Commanding Officer of USS *George Washington Carver* (SSBN 656), a position he held until 1987. In 1987 he was appointed Officer in Charge, Naval Underwater Systems Center, New London, CT. In 1989 he joined the Office of the Assistant Chief of Naval Operations for Undersea Warfare, serving as Head of the Tactical Weapons Branch.

From February to August 1990 Captain Mushen served as Director of the Advanced Submarine Technology Program in the Defense Advanced Research Projects Agency. He then joined the Naval Sea Systems Command's Submarine Directorate as Director of the Advanced Submarine Research and Development Office. In 1991 he became Commander, Naval Underwater Systems Center, and in January 1992 Commander, Naval Undersea Warfare Center Division Newport.

Captain Mushen's awards include the Meritorious Service Medal (3 awards), the Navy Commendation Medal (3 awards), and the Navy Achievement Medal (2 awards).

Captain Mushen and his wife, the former Marsha Russell, have four children: Rob, Jennifer, John, and Emily.

NAVAL UNDERSEA WARFARE CENTER DIVISION NEWPORT



EXECUTIVE DIRECTOR

DR. JOHN E. SIRMALIS

Dr. John E. Sirmalis was born in Providence, RI. He received his B.S. degree in 1956 and his M.S. degree in 1958, both in Mechanical Engineering, from the Massachusetts Institute of Technology. In 1975 he earned his Ph.D. in Mechanical Engineering from the University of Rhode Island in Kingston.

Dr. Sirmalis began his federal career with the Naval Underwater Ordnance Station (NUOS) in 1957, where he worked as a mechanical engineer from 1957 to 1967. In 1967 he became Head of the Advanced Underwater Weapons Division at the Naval Underwater Systems Center (NUSC). In 1972 he was appointed Head, Applied Research and Development Division at NUSC, and in 1977 he became Head of the NUSC Weapon Systems Department. In 1986 he was selected as NUSC's Associate Technical Director for Submarine Warfare Systems. He became Executive Director, Naval Undersea Warfare Center Division Newport, in August 1992.

Dr. Sirmalis has received the NUSC Award for Excellence in Science and Engineering, the Naval Material Command Commendatory Service Award, the NUSC Commanding Officer/Technical Director Award, the Meritorious Executive Presidential Rank Award, the Department of the Navy Superior Civilian Service Award, and a Special Act or Service Award.

Dr. Sirmalis is married to the former Elaine Tetreault and has four children: Kenneth, Jean, Sally, and Tod.

NAVAL UNDERSEA WARFARE CENTER DIVISION KEYPORT
KEYPORT, WA 98345
(206) 396-5111 DSN 744-5111

MISSION

Support the Mission of the Naval Undersea Warfare Center by providing test and evaluation, in-service engineering, maintenance and repair, Fleet support, and industrial base support for undersea warfare systems, undersea weapons systems, countermeasures and sonar systems. Execute other responsibilities as assigned by the Commander, Naval Undersea Warfare Center.

PERSONNEL

Commander: CAPT Edward L. Segrist, Jr., USN Ext. 2340
 Executive Director: Mr. G. Estes Grade Ext. 2348

	Civilian	Military
Total On Board (10/92)	3,405	291
FTP On Board (10/92)	3,318	
FTP Scientists & Engineers (10/92)	854	

LEADERSHIP AREAS

Undersea warfare modeling and analysis	Submarine electromagnetic, electro-optic, and nonacoustic effects reconnaissance, search, and track systems
Submarine combat and combat control systems	
Surface ship and submarine sonar systems	Undersea vehicle active and passive signatures (except HM&E)
Submarine electronic warfare	Submarine vulnerability and survivability (except HM&E)
Submarine unique on-board communications systems and communications nodes	Torpedoes and torpedo countermeasures
Submarine-launched weapons systems (except strategic ballistic missile systems, cruise missiles, and related systems)	
Undersea ranges	

FUNDING

(\$343.9 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	0.0	DRPM	1.7
6.2	0.0	NAVSEA	58.8
6.3a	0.0	Other Navy	20.5
6.3b	0.0	PEO SCWS	10.1
6.4	5.4	PEO SSAS	8.9
6.5	0.0	Total	100
6.6	0.0		
Other RDT&E	0.0		
O&MN	25.6		
APN	0.0		
OPN	12.9		
WPN	38.4		
SCN	2.8		
Other Navy	5.2		
All Other	2.7		
Total	100		

PROPERTY

Land	Acquisition Costs	Buildings
Owned 2,245 acres	Real Property \$172 Million	RDT&E 938,077 ft ²
	Equipment \$254 Million	Administrative 73,000 ft ²
		Other 1,589,948 ft ²

NAVAL UNDERSEA WARFARE CENTER DIVISION KEYPORT



COMMANDER

CAPTAIN EDWARD L. SEGRIST, JR., USN

Captain Edward L. Segrist was born in Lincoln, NE, and grew up in Prairie Village, KS, a suburb of Kansas City. He graduated from Rensselaer Polytechnic Institute in 1963 with a B.S. degree in Physics and was commissioned as Ensign from that school's NROTC unit.

After naval nuclear power training at Bainbridge, MD, and the S3G submarine prototype in Saratoga Springs, NY, Captain Segrist attended submarine school in New London, CT, then joined the precommissioning crew of the Polaris submarine USS *George C. Marshall* (SSBN 654). He served 4 years as Assistant Navigator, Assistant Weapons Officer, Electrical and Reactor Controls Officer, and Main Propulsion Assistant, qualifying in submarines and as Engineer Officer.

From 1969 to 1971 he served on the staff of Commander, Submarine Squadron Fourteen in Holy Loch, Scotland, as Assistant Weapons Officer and Assistant Squadron Engineer.

In 1971, as a CNO Professional Development Officer, Captain Segrist attended the Georgia Institute of Technology, where he earned an M.S. degree in Nuclear Engineering and achieved professional accreditation as a board-certified Radiation Health Physicist.

He served as Project Officer and Navigator aboard USS *Halibut* (SSN 587) from 1972 until her inactivation in 1975.

In 1976 Captain Segrist became an Engineering Duty Officer and served as Nuclear Submarine Ship Superintendent, Assistant Repair Officer, and Submarine Type Desk Officer at Pearl Harbor Naval Shipyard. He was Repair Officer at the Naval Submarine Support Facility, New London, from 1979 until 1981 and Planning Officer at the Trident Refit Facility, Bangor, WA, from 1981 to 1984 when the first Trident submarine, USS *Ohio* (SSBN 726), arrived.

He served as Deputy Program Manager for the Deep Submergence Systems Program, Naval Sea Systems Command, from 1984 until 1986, and as Planning Officer at Portsmouth Naval Shipyard in Kittery, ME, until July 1989. In September 1989 Captain Segrist assumed command of the Naval Undersea Warfare Engineering Station, Keyport, WA. In 1992 he became Commander, Naval Undersea Warfare Center Division Keyport.

Captain Segrist's military decorations include the Legion of Merit, the Meritorious Service Medal with three gold stars, the Presidential Unit Citation, two Navy Unit Commendations, and the Meritorious Unit Commendation.

He and his wife Carolyn have two sons, Kevin and Erik.

NAVAL UNDERSEA WARFARE CENTER DIVISION KEYPORT



EXECUTIVE DIRECTOR

G. ESTES GRADE

Mr. G. Estes Grade was born in Arkansas and grew up in Oregon. He attended Lewis and Clark College in Portland, OR, graduating with a B.S. degree in Physics.

Mr. Grade joined the civil service in 1963 and accepted a position with Naval Torpedo Station (NTS), Keyport, WA, where he worked on the engineering and installation of the Underwater 3-D Test Range near Nanoose, British Columbia. In 1967 Mr. Grade accepted a position with the Naval Ammunition Depot (NAD) near Honolulu at Lualualei, HI. In this position, he was responsible for providing underwater tracking instrumentation for Barking Sands Tactical Underwater Range, including developing the capability to provide underwater mobile targets for Fleet exercises. He also established the antisubmarine warfare (ASW) testing and exercise analysis and reconstruction capability for ships and submarines in the Hawaiian area and three Western Pacific sites (Japan, the Philippines, and Guam).

In 1974 NAD was realigned and became a detachment of NTS Keyport. During this time, Mr. Grade became Chief Engineer and Deputy Department Head of the 130-person department on Oahu and Kauai.

After a year and a half as Chief Engineer at the Hawaii Detachment, Mr. Grade returned to Keyport as Program Manager for ASW testing and ranges. While in this position, he acted as Naval Sea Systems Command ASW Test Agent for the Pacific Fleet. He initiated development of the Defensive Weapon System Test Program for the Trident, upgrading NTS Keyport ranges.

The title of NTS changed to Naval Undersea Warfare Engineering Station (NUWES) in 1978. Accepting the position as Head of a newly formed Program Coordination Office in 1979, Mr. Grade became responsible for funding and programmatic oversight of all technical and industrial programs at Keyport. He remained in that position until May 1989.

In 1989 he became Head of the Weapons Department, where he was responsible for line management of all industrial and manufacturing shops, weapons shops, weapons and combat systems depots, and ordnance operations.

In January 1990 Mr. Grade was selected as Technical Director, NUWES, and promoted to the Senior Executive Service. In 1992 NUWES became a division of the newly created Naval Undersea Warfare Center (NUWC). Under the restructuring, Mr. Grade's title changed to Executive Director.

Mr. Grade's awards include the "Outstanding Young Man of America Award" in 1970, Merit Pay Performance Awards, Special Act Awards, the Navy Material Command Productivity Excellence Award, and the Secretary of the Navy Letter of Commendation.

Mr. Grade and his wife, the former Linda Shields, have three children, Reneé, Brad, and Bret.

OFFICE OF NAVAL RESEARCH



CHIEF OF NAVAL RESEARCH

REAR ADMIRAL WILLIAM C. MILLER, USN

Rear Admiral William C. Miller was born in Los Angeles, CA. He received his B.S. degree in Naval Science from the Naval Academy in 1962, his M.S. degree in Electrical Engineering from Stanford University in 1965, and his Ph.D. in Electrical Engineering from Stanford in 1967.

Rear Admiral Miller served aboard USS *Dupont* (DD 941) from 1962 to 1963 and aboard USS *Gridley* (DLG 21, now CG 21) from 1967 to 1968. He served as the Weapons Officer aboard USS *Sampson* (DDG 10) from 1968 to 1970. In November 1970 he reported to the Office of the Chief of Naval Operations (CNO) as Assistant to the Executive Director and member of the CNO Executive Panel (OP-OOK).

From 1973 to 1975 he commanded USS *McCloy* (DE 1038, now FF 1038). In May 1975 he reported to the Surface Program Office in the Office of Naval Research, serving there until December 1975. He then joined the U.S. Naval Academy, first as an instructor and then as the Executive Assistant to the Superintendent, a position he held until 1979. In May 1979 he assumed command of USS *Cushing* (DD 985).

In December 1981 Rear Admiral Miller became Executive Assistant in the Office of the Assistant Secretary of the Navy (Shipbuilding and Logistics), and in 1983 he joined the Office of Naval Technology as Director of ONT-25, Low Observables Division. He was appointed Commanding Officer of the Naval Research Laboratory in October 1986. In August 1987 he returned to the Office of the CNO, serving as Director, Undersea and Strategic Warfare and Nuclear Energy Development Division (OP-981). One year later he became CNO Deputy Director, Navy Requirements for Research and Development, Test and Evaluation (OP-98B). In June 1990 he was appointed Chief of Naval Research.

Rear Admiral Miller's awards include the Legion of Merit with three gold stars in lieu of subsequent awards, the Meritorious Service Medal, the Navy Achievement Medal, the Meritorious Unit Commendation, the Navy Expeditionary Medal, the National Defense Service Medal with one bronze star, the Armed Forces Expeditionary Medal, the Vietnam Service Medal with two bronze stars, the Humanitarian Service Medal, and the Sea Service Deployment Ribbon. He is a designated Materiel Professional.

Rear Admiral Miller is married to the former Barbara Jean Leach. They have five children: Linda, William, Julie, James, and Marianne.

NAVAL RESEARCH LABORATORY
WASHINGTON, DC 20375-5320
(202) 767-3200 DSN 297-3200

MISSION

Operate the Navy's full-spectrum corporate laboratory to conduct a broadly based multidisciplinary program of scientific research and advanced technological development directed toward maritime applications of new and improved materials, techniques, equipment, systems and ocean, atmospheric, and space sciences and related technologies. In fulfillment of this mission, the Naval Research Laboratory:

- Initiates and conducts scientific research of a basic and long-range nature in scientific areas of special interest to the Navy.
- Conducts exploratory and advanced technological development deriving from or appropriate to the scientific program areas.
- Within areas of technological expertise, develops prototype systems applicable to specific projects.
- Performs scientific research and development for other naval commands and, where specifically qualified, for other agencies of the Department of Defense and, in defense-related efforts, for other government agencies.
- Upon request from appropriate naval commands, assumes responsibility as the Navy's principal R&D activity in areas of unique professional competence.
- Serves as the principal activity for the Navy and its contractors in providing accurate calibration, test, evaluation, and reference standards services on acoustic transducers and materials.
- Serves as the lead Navy activity for mapping, charting, and geodesy research and development for the Defense Mapping Agency.

PERSONNEL

Commanding Officer: CAPT Paul G. Gaffney II, USN
 Director of Research: Dr. Timothy Coffey

Ext. 3403
 Ext. 3301

	Civilian	Military
Total On Board (10/92)	4,017	176
FTP On Board (10/92)	3,728	
FTP Scientists & Engineers (10/92)	1,886	

LEADERSHIP AREAS

Primary in-house research for the physical, engineering, space, and environmental sciences

Broadly based exploratory and advanced development program in response to identified and anticipated Navy needs

Broad multidisciplinary support to the Naval Warfare Centers
 Space and space systems technology, development, and support

FUNDING

(\$730.1 Million, FY 1992)

By Category	Percent	By Sponsor	Percent
6.1	13.3	SPAWAR	4.0
6.2	15.5	NAVAIR	5.4
6.3a	4.2	NAVSEA	6.5
6.3b	5.3	NAVFAC	0.1
6.4	6.8	NAVSUP	0.1
6.5	0.8	OCNR	37.6
6.6	1.9	SSPO	0.3
Other RDT&E	26.7	DOD	22.4
O&MN	6.1	Other Navy	18.9
APN	1.2	All Other	4.7
OPN	8.2		100
WPN	0.3		
SCN	0.7		
Other Navy	1.0		
All Other	8.0		
Total	100		

PROPERTY

Land	Acquisition Costs	Buildings
Owned 622 acres	Real Property \$787 Million Equipment \$267 Million	RDT&E 3,052,431 ft ² Administrative 223,416 ft ² Other 420,037 ft ²

NAVAL RESEARCH LABORATORY



COMMANDER

CAPTAIN PAUL G. GAFFNEY II, USN

Captain Paul G. Gaffney II was born in Attleboro, MA. He received his B.S. degree in Oceanography from the Naval Academy, Annapolis, MD, in 1968 and his M.S.E. degree in Oceanographic Engineering from Catholic University, Washington, DC, in 1969. He has done graduate work as an Advanced Research Fellow at the Naval War College, Newport, RI. In 1986 he received his M.B.A. degree from Jacksonville University, Jacksonville, FL.

Captain Gaffney's first assignment was as Operations Officer aboard USS *Whippoorwill* (MSC 207), Sasebo, Japan, from 1969 to 1971. He served as an advisor to the Vietnamese Navy Combat Hydro Survey Team in 1971 and 1972, and then was assigned as Ocean Services Officer at Fleet Weather Central in Rota, Spain, from 1972 to 1975. From 1975 to 1978 he served as Executive Assistant to the Oceanographer of the Navy. In 1978 and 1979 he studied at the Naval War College Center for Advanced Research, after which he became Commanding Officer, Oceanographic Unit Four, Indonesia. In 1980 and 1981 he served as Acting Director of Arctic and Earth Sciences Research in the Office of Naval Research, and from 1981 to 1983 he was Military Assistant to the Assistant Secretary of Defense (International Security Affairs).

In 1983 Captain Gaffney became Commanding Officer of the Naval Oceanography Command Facility, Jacksonville, FL, a position he held until 1986. From 1986 to 1989 he was OPNAV Division Director (Oceanographic Resources, OP-960). From 1989 to 1991 he was Assistant Chief of Naval Research.

Captain Gaffney's awards include the Combat Action Ribbon, the Navy Commendation medal, the Meritorious Service medal, the Bronze Star "V," the Legion of Merit (two awards), and the Defense Superior Service Medal. He has also won the J. William Middendorf Prize for Strategic Research.

He is married to the former Linda Myers. They have a daughter, Christa.

NAVAL RESEARCH LABORATORY



DIRECTOR OF RESEARCH

DR. TIMOTHY COFFEY

Dr. Timothy Coffey was born in Washington, DC. He received his B.S. degree in Electrical Engineering from the Massachusetts Institute of Technology in 1962. He received his M.S. degree in 1963 and his Ph.D. degree in 1967, both in Physics, from the University of Michigan.

During his graduate career, Dr. Coffey worked as a research assistant at the University of California, as a research physicist at the Air Force Cambridge Research Laboratories, and as a teaching fellow and research assistant in physics at the University of Michigan. As a scientific consultant for EG&G, Inc., from 1966 to 1971, he was involved in investigations in theoretical and mathematical physics.

Dr. Coffey came to the Naval Research Laboratory (NRL) in 1971 as Head, Plasma Dynamics Branch, Plasma Physics Division. In this position, he directed research in the simulation of plasma instabilities, the development of multidimensional fluid and magnetohydrodynamic codes, and the development of computer codes for treating chemically reactive flows. In 1975 he was named Superintendent of the Plasma Physics Division. In 1980 he was appointed Associate Director of Research for General Science and Technology at NRL. He became Director of Research in November 1982.

Dr. Coffey is recognized as an authority on the theory of nonlinear oscillations and has played a major role in the national program on high-altitude nuclear effects. The author of over 75 publications and reports, he has made several fundamental contributions to the theory of electron beam-plasma interaction and to the understanding of plasma processes in the Earth's ionosphere.

Dr. Coffey is a Fellow of the American Physical Society and a Fellow of the Franklin Institute. He is also a Resident Fellow of the Washington Academy of Sciences. His awards include the DOD Distinguished Civilian Service Award, the Delmer S. Fahrney Medal for Leadership in Scientific Research and Technology, the SES Rank of Distinguished Service, the Rear Admiral William S. Parsons Award for Scientific and Technical Progress (honorable mention), and the Presidential Rank of Meritorious Executive.

Dr. Coffey is married to the former Paula Marie Smith. They have three children, Timothy, Donna, and Marie.